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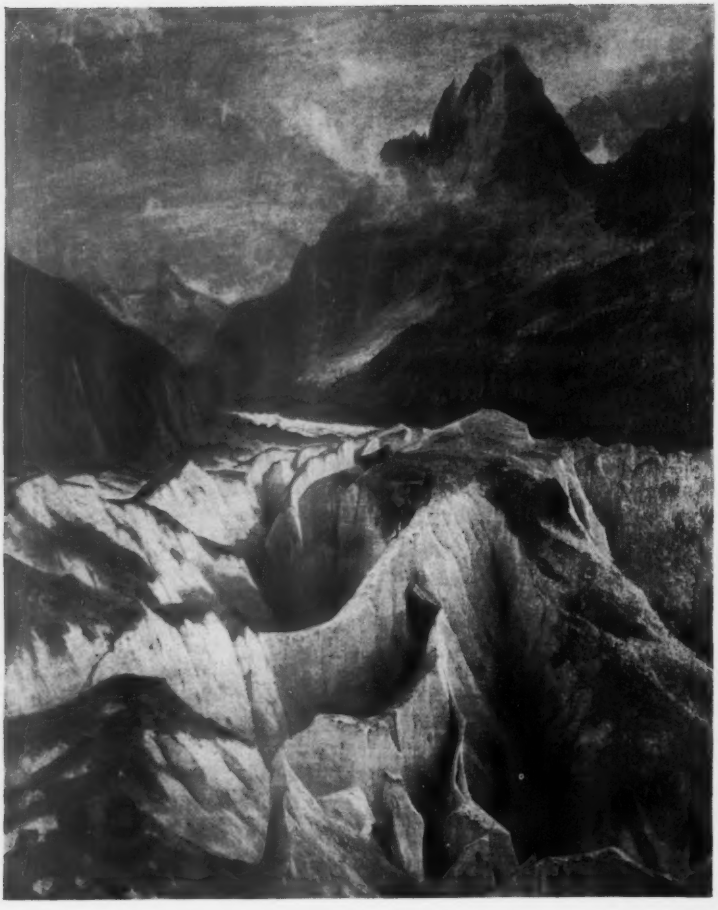


THE BLACK VEIN ON THE MER DE GLACE AT CHAMOUNIX
By Gabriel Loppé (1825-1913)
(See p. 177)

THE
AMERICAN ALPINE JOURNAL

VOLUME VI 1946 NUMBER 1

The Mountains of Iceland

HENRY A. PERKINS

IT was a combination of Jules Verne and hay fever that was responsible for my first trip to Iceland in the summer of 1900. Reading *A Journey to the Center of the Earth* as a boy had created an urge to see that strange land where volcanic craters inscribed with mystic runes led down into the bowels of the earth. But it took a bad attack of hay fever while bicycling on the Rhine early that summer to clinch the matter. "Let's go where there isn't any hay," I said to my classmate and companion. "That sounds good to me," he replied. So off we started via Copenhagen, Leith, and the Faroe Islands.

Two major disappointments were in store for me. First there *was* hay. They were cutting the succulent very green grass of the river valley when we arrived, and even mowing the roofs of their homes, many of which had a luxuriant growth like a three weeks' beard. But Icelandic grass must be different from European grass because I was cured of hay fever for that season. The other disappointment was in the volcano of Jules Verne's tale. Snaefells Jökull ("Snefel" in the books) is 75 miles as the crow flies across the wide Faxa Fjord from Reykjavik, and well over 100 miles of hard riding by land in just the wrong direction if one wants to see the usual sights of Iceland. So we had to be satisfied with occasional glimpses, when clouds permitted, of its beautiful white cone seen at the end of its long peninsula Snaefellsness across the bay.

There is a curious fascination about Iceland that comes from its sinister volcanic landscape, its snowy domes, its vivid green valleys, its superb waterfalls, its people, their history and their sagas. The books of early travellers testify to the spell it cast upon them, and also to the quaint notions they carried away from "Ultima Thule." For instance a certain Danish naturalist named

Horrebow visited Iceland about 1755 and wrote an account of *The Natural History of Iceland,* of which the English translation was published in 1758. Chapter 26 is entitled "Whether there are wild beasts in this island." In it he discussed only polar bears that sometimes come from Greenland on floating ice, and explains how the natives "get out of the way by throwing something to amuse him. A glove is very proper for this purpose; he will not stir till he has turned every finger inside out; and as they are not very dextrous with their paws, this takes up some time, and in the meantime the person makes off." But the gem of the book which made it famous is Chapter 72, "Concerning snakes." It reads: "No snakes of any kind are to be met with throughout the whole island," and has long been quoted (usually misquoted) as the shortest chapter in literature.

Travels in Iceland by Sir George Mackenzie, published in Edinburgh in 1811 is a classic in its field. It is beautifully printed, and illustrated with fine colored lithographs and engravings from sketches by the author. These are models of restraint in comparison with most travel books of the period, when the author and artist let themselves loose in a perfect orgy of fantastic imagination. In contrast to Mackenzie's truthful representations of Icelandic scenery are the illustrations in *Iceland; Its Scenes and Sagas,* by S. Baring-Gould published in 1863. These too are after drawings by the author and remind one of Gustave Doré on a rampage. In fact Baring-Gould's interest in *Curious Myths of the Middle Ages* and *Were Wolves* seems to have developed his imagination to an inordinate degree. However, the book is full of information and delightful reading, including an account of a fabulous monster, the "skrimsl" which various persons assured the author they had been depositing itself in a lake. A very different travel book is the little known *How the Mastiffs went to Iceland,* by Anthony Trollope, published in 1878. It is not an example of the author's style at its best, but the account of the party's voyage on the yacht Mastiff and their trip to Thingvellir and the geysers is diverting, while the spirited pencil drawings by a lady of the group make the book unique among Icelandic travel tales.

At one time, say between 1880 and 1910 almost everyone who really travelled in Iceland seems to have felt an irresistible urge to write a book about it. The collection of such books in English

alone is quite extensive, but browsing through their pages one soon learns to look for accounts of the standard sights, just as an earlier generation wrote up the "grand tour" in Europe. They had to see Thingvellir (Tingvalla), the geysers (Geyser and Strokkr) and Mt. Hekla which some of them climbed, while a few more venturesome souls visited the Northland volcanic region near Myvatn and saw Europe's greatest waterfall Dettifoss. But few did any serious climbing and the natives did none at all unless obliged to in travelling or hunting or in rounding up the sheep in the fall. Recently, however, the Icelanders have become ardent explorers of the more inaccessible portions of their own land where even after a thousand years of history there are still unknown regions and first ascents to be made.

Roughly speaking there are three kinds of mountains in Iceland. One of these is the fell or fjall[1] which is a rocky peak sometimes like the "horns" of Switzerland on a reduced scale and as a rule not over 3000 ft. high. They would be fairly easy climbing by an experienced rock climber except for the fact that they are disintegrating at a rate which makes hand and footholds extremely uncertain. One such which I attempted solo in 1902 nearly resulted in disaster because the higher I climbed the more "rotten" the rocks became and it was necessary to kick or pull out many loose pieces before gaining a firm hold, while the tremendous leaps they took in bounding down the mountain were far from reassuring. Finally with a very precarious hold for both fingers and toes I discovered that a large block I was pressing against midway between my extremities was gently oscillating, just ready to be dislodged. By working sideways very slowly and with great care, I avoided that particular threat, but was never so frightened in my life, and concluded that even a possibly unscaled mountain not over 3000 ft. high was not worth the risk of making the remaining three or four hundred feet. Perhaps it was a case of "sour grapes," but I never regretted that decision.

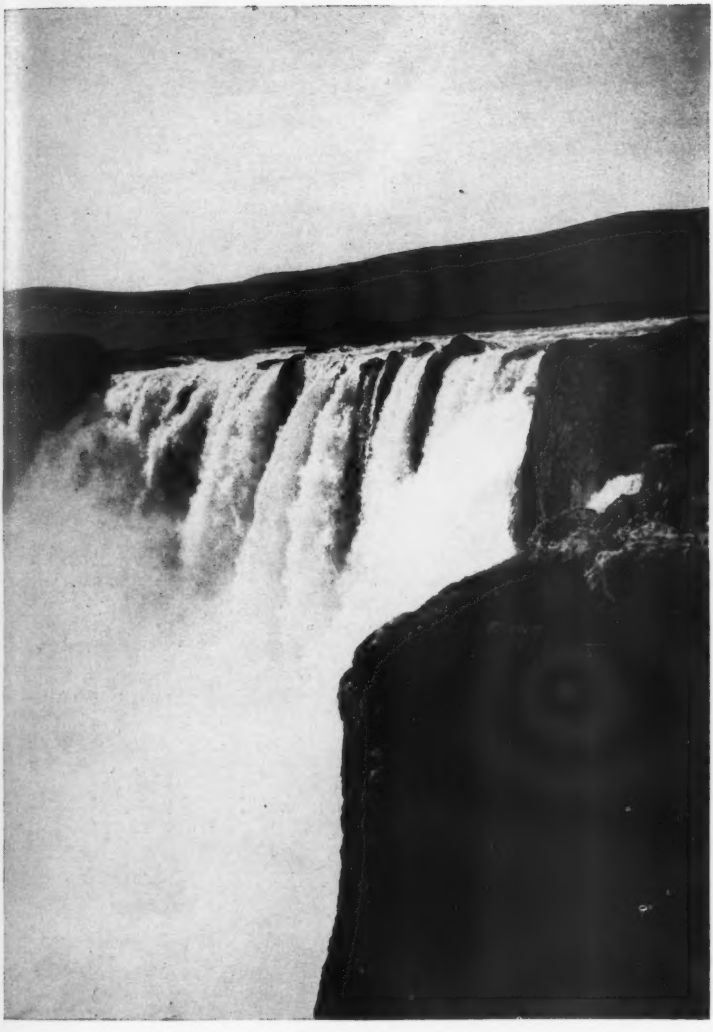
A mountain with one or more glaciers as well as an individual glacier is a jökull. Some of them are also fells like the Eyafjalla Jökull which has a rocky cone surrounded by glaciers like an island,

[1] The double *l* in these words is pronounced something like the double *l* in such Welch names as Llandudno. It is not "th" but almost like an unvocalized "tl" ejected from the corners of the mouth. One writer says the only successful way to do it is to have a hollow tooth, put your tongue in it and draw it out smartly.

hence the "Eya" part of the name, meaning island. Snaefells Jökull is another example of such a combination of rock and glacier. But a typical jökull is a large dome-like area of ice and snow without conspicuous peaks, from which stream huge glaciers. It is chiefly interesting as being an isolated remnant of the last ice age. The most remarkable of these is the Vatna Jökull, a vast glaciated triangle larger than all the glaciers of Switzerland and Norway combined in the southeastern part of the island. It has been crossed several times and partly explored in recent years, though there is considerable evidence to show that it was once less forbidding than at present and that the early settlers in the northland used to cross it on horseback to reach the fishing grounds on the south coast. A large portion of this icefield is an undulating plateau ringed around by rocky eminences and volcanoes, some of which have been disastrously active in modern times. On the southern edge rises Öraefa Jökull one of the most destructive, and its culminating peak the Hvannadals Hnukur (6952 ft.) was long regarded as Iceland's monarch. But in 1935 Pollitzer-Pollenghi with a small party found a slightly higher summit, the Bardar Gnypa (6966 ft.) on the northwestern edge of Vatna Jökull. This is not as spectacular a summit as the former monarch but is pretty surely the highest point in Iceland. After the Vatna Jökull come Langjökull and Hofs Jökull. The former is shown in the plate which gives an excellent idea of this peculiarly Icelandic formation. It has not the beauty of a Jungfrau or a Weisshorn, but its great spread compensates somewhat for its want of height. When seen in the distance stretching its endless white mass along the horizon it has a peculiar majesty suggestive of ages long ago.

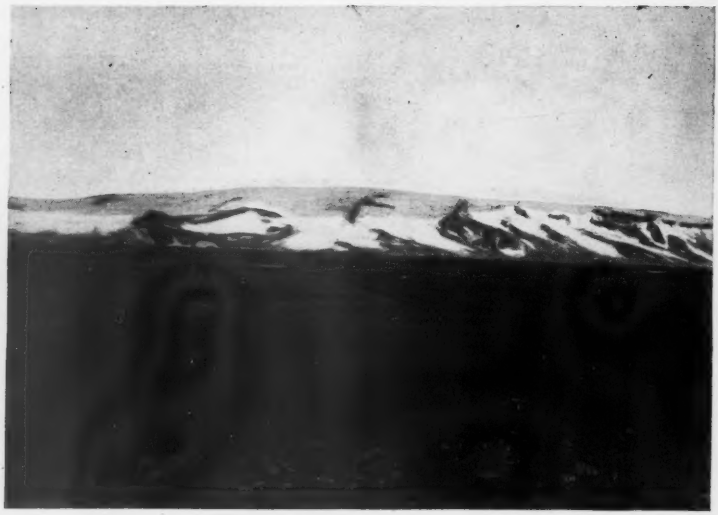
Volcanoes are Iceland's specialty. No similar area begins to have so many or to have thrown out such vast quantities of lava in historic times. Five thousand square miles are covered with lava. Dr. Stefanson tells us in his *Iceland, its History and Inhabitants*[2] that the lava desert Odathahraun covers 1700 square miles of lava ejected by twenty volcanoes. He says: "The cubic capacity of the lava ejected here would make a solid cube, each side of which would measure about fifty miles. The peninsula of Reykjanes alone contains no less than 300 volcanoes with about 700 craters." He must have counted very ancient ones, however, for

[2] Washington Government Printing Office, 1907.



GÖTHAFOSS
Iceland's loveliest waterfall

Photo, H. A. Perkins



LANGJÖKULL
From the Northwest

SKESSUHORN AND HAFNARFJALL
East of Borgar Fjord

Photos, H. A. Perkins

a total of 130 volcanoes in Iceland was Findahl's estimate in 1928. Of these twenty-five may be rated as active, and from the earliest records till today there have been about fifty-six important eruptions. Hekla, the most active of all, accounts for twenty of these at intervals averaging fifty years. Next comes Katla about thirty miles southeast of Hekla in the midst of the great glacial fields of Myrdals Jökull. Its latest eruption in 1918 coincided with the terrible influenza epidemic which decimated the population during a *Seven Days of Darkness*.[3] Then there are recorded at least eleven submarine eruptions mostly off the southwest peninsula of Reykjaness. Trolladyngja has erupted seven times. Öraefa Jökull five times, and so on through the list of active volcanos. The record shows that although there are usually no smoking volcanoes like Vesuvius or Stromboli, it would be rash to pronounce any of them extinct. For instance Eyjafjalla Jökull's first recorded eruption was in 1612, and it has erupted twice since then, although it must have been "extinct" during 600 years of Icelandic history. Eruptions in the Vatna Jökull area in recent years have been equally surprising as some have to break through hundreds of feet of the ice sheet above them. Even Snaefells Jökull long supposed extinct may some day awaken from its sleep and rain ashes down on Reykjavik. So Icelanders literally live on a volcano and never know when or where the next eruption will occur. It must add considerable uncertainty to life there, but the inhabitants are so used to it that no one seems to worry about an eruption until it happens.

From the standpoint of a mountaineer, Icelandic mountains do not afford a playground comparable with the Alps, for instance. However, they are not to be despised, and they offer great variety in the character of an ascent. Hekla has, of course, been climbed a great many times and offers no technical difficulties. It is 5108 ft. high, and the ascent should be made in four hours and a half, the first part of the way on horseback. Near the top the snow is fairly steep, and the final cinder cone still steeper, but there are no glaciers and crevasses to negotiate and no serious rock work. So one climbs it for its geological interest and the fine view that may, or may not, be obtained from the summit.

[3] Title of English translation of Gunnar Gunnarsson's *Salige er de Enfoldige.*

Quite a different proposition is Snaefells Jökull whose icy cone seen from Reykjavik across the blue Faxa Fjord has a strong appeal for mountain climbers. It is only about 4700 ft. high, but offers such serious difficulties that it has probably never been quite conquered unless very recently. At any rate when I first saw it in 1900 it was regarded as unconquered, and Küchler writing of his own attempt in 1909 had the same impression. In 1930 Jon Eythorssen got within about 100 feet of the middle, and highest, peak but like numerous predecessors could not quite make the summit. Indeed it seems probable that no other snow mountain of so little altitude has ever proved so baffling. The difficulties are the weather, an extremely fatiguing approach and finally one appalling cleft (the old crater) between the central and true summit and the eastern peak. Considering these peculiarities an outline of the more important early assaults seems worth our consideration.

One of the first attempts to climb Snaefells Jökull was by Eggert Olafsson who is said to have made an unsuccessful assault in 1755, and again with Paulsson in 1774. In this second attempt they reached the summit of the eastern peak, but could not attain the highest (central) summit because of a cleft in the ice which "had a horrible aspect." In 1789 a party composed of John Stanley (later Sir John) with Messrs. Wright, Benners, Crawford and Caldin nearly succeeded. Three of them got to within what seemed "a few yards" of the summit. There they were nearly stopped by a chasm crossed by a snow bridge about a foot thick. This Stanley and Wright succeeded in crossing and reached what they thought was the summit and descended to the others to fetch the barometer. Benners joined them on a second ascent; but this time, the sun having risen, they discovered that the "real summit" was the middle one, a thousand yards further west, and they made no attempt to reach it.

In 1810 two members of Sir George Mackenzie's party, Drs. Bright and Holland climbed the eastern peak which they found to be 4460 ft. high, but did not reach the central peak which "was still 100 feet above us."

In 1814 Dr. Ebenezer Henderson had a try with one companion and three Icelanders to carry provisions etc. Near the top the pitch was so steep that they could not go more than 30 or 40 paces at a time without resting. He writes: "About 3 o'clock we ulti-

mately succeeded in reaching the base of the highest peak, when all at once a most tremendous precipice appeared at our feet exceeding 2000 feet of nearly perpendicular depth . . . Skirting the brink of the frozen precipice, we ascended the north side of the peak, but after climbing to within three or four yards of its summit we were debarred all further progress by a perpendicular wall of icy pillars . . . and completely surrounding the summit which we could reach with great ease with the end of the poles or long walking staves in our hands." This sounds decidedly queer, but I leave its interpretation to more profound students of mountains, and especially "climbers tales," than I am.

A French climber, Gaimard, attacked the mountain from the N. in 1835 instead of the usual approach from the S. E. It was much less steep from that side and he nearly succeeded. In 1859 Commander Forbes, R. N., made a gallant attempt but was frustrated by a snowstorm and the refusal of his companions to go further. Lord Garvagh, a complete novice, almost reached the summit in 1872 after climbing only four hours from the snow line. But here his guide gave out with "blood from his ears and in his eyes . . . unable to breathe atmosphere so rarified." (at 4500 ft.!) Lord Garvagh was thoroughly disgusted as he had found the ascent surprisingly easy and counted on conquering what he believed to be a virgin peak.

In 1909 a German traveller, Carl Küchler, reached the base of the triple summit at a point where he obtained, from the E., probably the first close-up photograph of the top. But he considered the ascent from that flank or from the south too dangerous to attempt, as it was traversed by countless crevasses. Moreover in his book (a really poetic rhapsody on Icelandic scenery) he tells us that having lost a younger brother two years before on the Jungfrau, he felt unwilling to run a similar risk although like all the others he believed that no one had actually reached the true summit. After reading these various accounts one is convinced that most attempts failed through the inexperience or poor equipment of the climbers, and that an expert mountaineer, such as those the new movement in Iceland is developing, should have no serious difficulty in reasonably good weather.

A really difficult climb, even for an expert, is Herthubreith. The name means "broad shouldered" and the two sounds I have indicated by *th* are really the single Icelandic letter "eth" pro-

nounced like the soft *th* in father. This mountain was undoubtedly a virgin peak when I saw it in 1902, but Professor Stefan Einarsson of Johns Hopkins University tells me that it was climbed less than ten years ago by a party of three Icelandic explorers: Olafur Jóhnsson and Edvard Sigurgeirsson of Akureyri; and Stefan Gunnbjörn Egilsson of Laxamyri. Herthubreith is said to be 5477 ft. high, and seen, as I saw it, from the northwest at a distance of nearly 35 miles it is a formidable and unusual mountain. It rises quite alone from a sandy plane black with cinders and with occasional green pasture land surrounded by rough and barren lava. Some of this lava Richard Burton describes as having a "green glaze fresh as if laid on yesterday." It was like riding on "domes of cast iron," he says, "a system of boilers." Then comes a moat or kind of bergschrund encircling the mountain, its inner flank sometimes rising in high cliffs near the beginning of the talus made of palagonite clay as well as cellular basalt of all sizes, some as large as "an Icelandic room." This talus reaches far up the mountain where the "core" begins. This core is the original mountain exposed by gradual disintegration. It rises in buttresses and flying buttresses resembling pillars of mud and very steep. From a distance of 35 miles one would judge it to have an average slope of perhaps 80°. The heads of these columns Burton says form a cornice, the mountain's "shoulders," and "from the summit of the cylinder an unbroken cone of virgin snow sweeps grandly up to the apex." It is a superb mountain even at the distance from which I saw it.

Burton in his *Ultima Thule,* from which I have just quoted, attempted an ascent in 1872. He worked his way around from the base (1500 ft. above sea level) on the lower, less precipitous slopes below the "pillars" from the N. toward the E. Then "after an hour and a half of very hard work, for we had scrambled up nearly 2000 feet, we reached the mud pillars, and serious difficulties began." They then had about 2000 ft. still to climb. It was late, as they had lost valuable time by taking the worst possible route in reaching the base. The sun was setting and Burton's Icelandic companion Steffan was exhausted. Stones began falling from above (a peculiarity of Iceland where "cannonades" occur toward evening instead of in the morning). He attempted to negotiate a couloir but had three narrow escapes and finally "judged the game was not worth the candle." So though close to the snow cone, he

had to abandon the attempt and could not renew it later because his companion whose "footgear was in tatters" had to return to the starting point where he had been promised to another traveller. In reading this account one realizes that Mr. Burton, better known for his exploits in Arabia and for his translation of the Arabian Nights, had plenty of courage and considerable technical skill, so that if he could have tried again with the experience gained from the first attempt, he would probably have succeeded.

Herthubreith was regarded as impregnable for many years. In 1881 Mr. John Coles, F. R. G. S., en route with two friends to explore Askja stopped to admire "the broad shouldered mountain" and writes: "Its summit is said to be inaccessible, though we met an American at Reykjavik who said he had ascended it, and the New York Tribune contained an amusing description of his expedition." This was my former fellow townsman William Lee Howard, later of Baltimore and locally noted for his tall tales. This particular tale was based on a genuine trip to Iceland the same year that Coles was there. On his return he gave an interview to a Tribune reporter. It was printed on October 19, 1881, and a portion reads as follows: "I climbed to the top of it (*i.e.* Herthubreith), 6740 ft. above sea level. The only way to ascend for 1500 ft. was to fly a large kite with an anchor attached, and a rope fastened to the anchor. After securing the anchor to the rocks above my head, I would pull myself up by means of the rope. By repeating the operation many times I made the ascent in thirty-eight hours."

Askja is a volcano forming part of a group of volcanic mountains called Dyngju-fjöll. It has by far the largest crater of any of the Icelandic volcanos and its eruption in 1875 was the most impressive of any in the world during the nineteenth century, barring the appalling explosion of Krakatoa in the Straits of Sunda in 1883. Apparently Askja was unknown, as a volcano at any rate, until this its first recorded outbreak from a very long slumber. The region to the north and west of it had been surveyed in 1837 by Gunnlaugsson, but bad weather drove him back before he could make a really accurate survey of the region. So no one really explored Askja until the year of its great eruption which began with a tremendous explosion January 4, 1875. During the following February, Iceland's worst month, an adventurous Icelander, Jón of Vithikaer crossed the lava desert Odathahraun ("evil deeds

lava flow") as far as Askja which must have temporarily subsided. He did not climb the volcano, but he did find the ruins of the ancient abode of the outlaws whose misdeeds gave the desert its name. On March 29 the greatest eruption of pumice and ashes took place covering 3000 square miles with pumice to a minimum depth of two inches on the east coast 50 miles away.

The first real ascent of Askja was made during the following summer, when it was still extremely active, by a hardy and courageous young man from Scotland named William Lord Watts. After crossing the Vatna Jökull in terrible weather, a really remarkable feat, he saw the Dynjufjöll far to the north "smoking away with greater ferocity than ever" and decided to go there and see what it was all about. He and his party of Icelanders reached the edge of the crater and he writes: "Beneath us lay a pandemonium of steam and hideous sounds. Suddenly a fearful crash made us stand aghast; it seemed as if half the mountain had tumbled in upon the other side of the horrible valley . . . while the most hideous shrieks, groans, booming and screaming sounds rose from all parts of this terrible depression." Rifts kept opening near them and "a mile away to the north we could see the rim of the crater, at a great depth beneath us, and while we were looking at it, a great crack opened upon its margin, and a huge slice slipped with but little noise into the crater." Further on he writes: "We turned our backs upon what I can imagine to be one of the most indescribable sights the world can anywhere present!" What he was observing was probably the formation of a great abyss which a few years later had become filled with water forming quite a sizeable lake.

Askja was visited and mapped the following summer by Professor Johnstrup and Lt. Caroc of the Danish Navy, but the most careful study of the volcano during those years was made by Mr. W. G. Lock, F.R.G.S., who visited it in 1878 and in 1880. His book *Askja, Iceland's Largest Volcano* describes the second and more successful trip in 1880. At that time the volcano was still more or less active. He writes: "Steam belched forth at intervals from about a dozen large holes and rifts with such violence that the rocky ridge upon which we stood trembled." Then he descended to the floor of the crater 800 ft. below and writes: "It is almost circular in shape, quite seventeen miles in circumference, and encircled by a somewhat jagged mountain wall varying from 800 to

1500 ft. in height above the superficial lava . . . At least three of its highest hollows contain true glaciers." He further observed that almost diametrically opposite each other were gaps in the wall through one of which much of the lava of the Odathahraun must have flowed. Then he continues: "The crossing of the lava-covered floor of Askja is the most fatiguing work; it has taken me, a young and active man, each time that I have crossed four hours to proceed as many miles, most of the way by the aid of my hands protected by thick woollen mittens that they might not be cut by the lava." He also climbed an inner cone which he called the "Pumice Crater" rising 200 ft. above the lava floor and writes that the view from its summit "is as unquestionably unique as it is wildly weird."

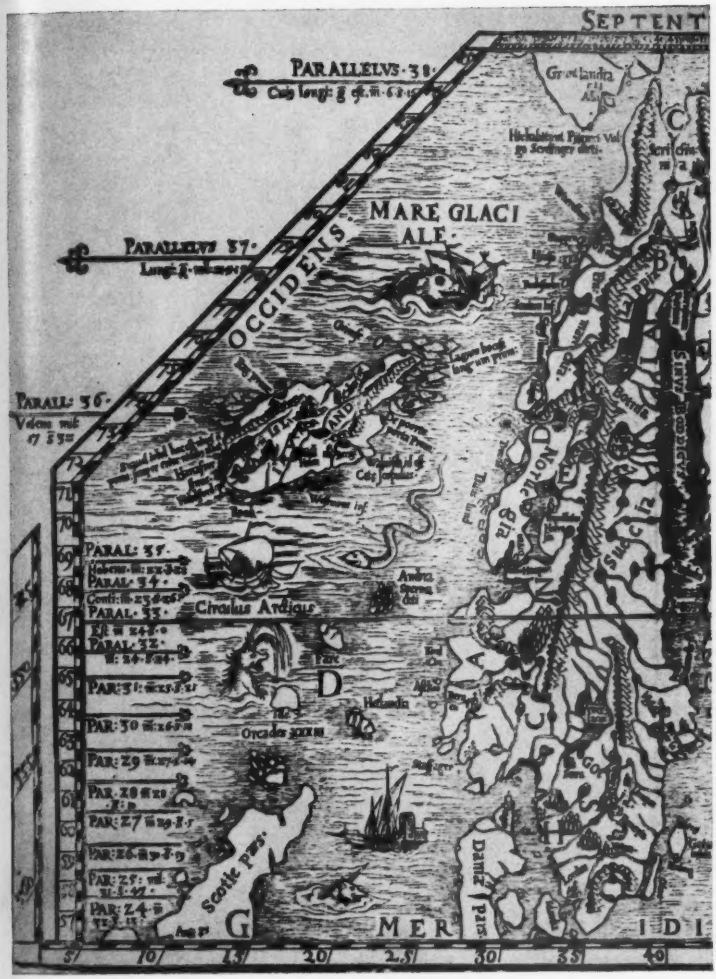
By far the most remarkable of Iceland's mountain massifs is the Vatna Jökull. Its great ice cap is ringed around with volcanoes and glaciers, and even now it has been only partially explored. Its name means "the glacier of waters" which is very apt, as the melting of such a mass of ice gives rise to many great rivers some of which suddenly appear, flow for a time, and then as suddenly run dry. Hans Wilhelmsson Ahlmann, a Swedish geologist, in his book *Land of Ice and Fire* (London, 1938) says the annual precipitation in the "Devils Pass" 4000 ft. above sea level is about thirteen feet, compared to two feet three inches in Spitzbergen, and he adds: "There can be no doubt but that Vatna Jökull is something quite special in the way of glaciers." One of its rivers, the Jökulsá, has a flow of water greater than that of any other river in Iceland although it is barely one kilometer long. It wells up from underneath the glacier (not through a hole) carrying enormous quantities of mud and gravel from far underneath the glacier."

It is the combination of water, ice and lava that makes the southern portion of the Vatna peculiarly terrible and peculiarly Icelandic. For instance in 1727 Öraefa Jökull staged a terrific eruption when lava melted the ice, and the glacier "suddenly slid with enormous floods of water down on the lowlands and washed away whatever blocked its path. Everything perished. That which was not crushed by ice was drowned in the floods. That which was not consumed by fire was buried beneath the ash and pumice." This was described by an eye witness and reported by Olaus Olavius in *Oekonomisk Reise,* Copenhagen, 1780, and he

further reported: "When the deluges had passed, the glacier itself slid forward onto the plain looking exactly like molten metal that is poured from a melting pot."

Ahlmann's book already referred to, and from which the above quotations were taken, describes a thoroughly modern expedition with dog teams and base camps established on the ice cap itself. The purpose was to study the formation of the cap and especially its annual change in thickness. The expedition covered quite a large practically unexplored area especially in the central and western portions. In one place toward the western boundary they found "two open craters from whose boiling lava the smoke arose steadily (and) betrayed the volcano sleeping beneath the ice, one of the strangest examples in nature of heat and cold, fire and ice side by side."

The classic description of this great snow cap is in Watts' account *Across the Vatna Jökull.* There he describes the first crossing in modern times (1875) and the book is absorbingly interesting. It took them twelve days to cross the plateau from S. to N. partly because of fearful weather conditions. In places the crust broke through to their knees but luckily the sleds they were pulling remained on top. He writes: "Although the snow became worse and worse and we sank deeper into it as we proceeded, we managed to do five hours work by halting every quarter of an hour." Then came a storm which continued two days. The compass was useless and it was "impossible to get many yards away from the tent without being lost." After that there was more soft snow and they were reduced to half rations. Finally they abandoned the sleds and the six men in the party carrying supplies and equipment on their backs, continued wading through snow up to their knees. The plateau rose in altitude as they moved northward until they reached a height of 5900 ft. Then followed other storms, and Watts writes: "Never before had I heard the wind make such an unearthly wail. It seemed as if every imaginable demon and all the storm spirits of that wild region had assembled to howl and make a united attack upon us." From the northern and highest rim (6150 ft. where they reached it) they descended very steeply down precipitous snow slopes succeeded by a fringe of glaciers and then by lava flows. "The snow terminated in half melted slush lying on a bottom of ice. Wading through the slush which at times took us up to the waist, we next reached Kistufell where the ice and snow



ICELAND AND SCANDINAVIA

Olaus Magnus, *Historia de Gentium Septentrionalium*, 1567

ICELAND
Blaeu's *Atlas Major* (1646 edit.)

terminated . . . The Vatna Jökull now lay behind us with its mysterious recesses and volcanos carefully guarded from intrusion by gloom and storm."

Ahlmann's party sixty years later had better weather and were far better equipped, but they too were impressed with the forbidding character of this greatest of Iceland's mountains whose vastness and inaccessibility should give it a high rating with mountaineers in search of new conquests and adventures.

Note.—Two early maps are among the illustrations. The first is from the first Swiss edition (Basle, 1567) of *Historia de gentium septentrionalium*, by Olaus Magnus. This shows Iceland, with Mt. Hekla in eruption and a polar bear on an ice-pan off the east coast. In the northern part of Scandinavia there are figures of men skiing and ski-jöring with reindeer.

The second map is from the rare French edition (1646) of Blaeu's *Atlas Major*, and shows Mt. Hekla in eruption, a representation characteristic of many 15th and 16th century maps.

Tolosa

ARTHUR B. EMMONS 3RD

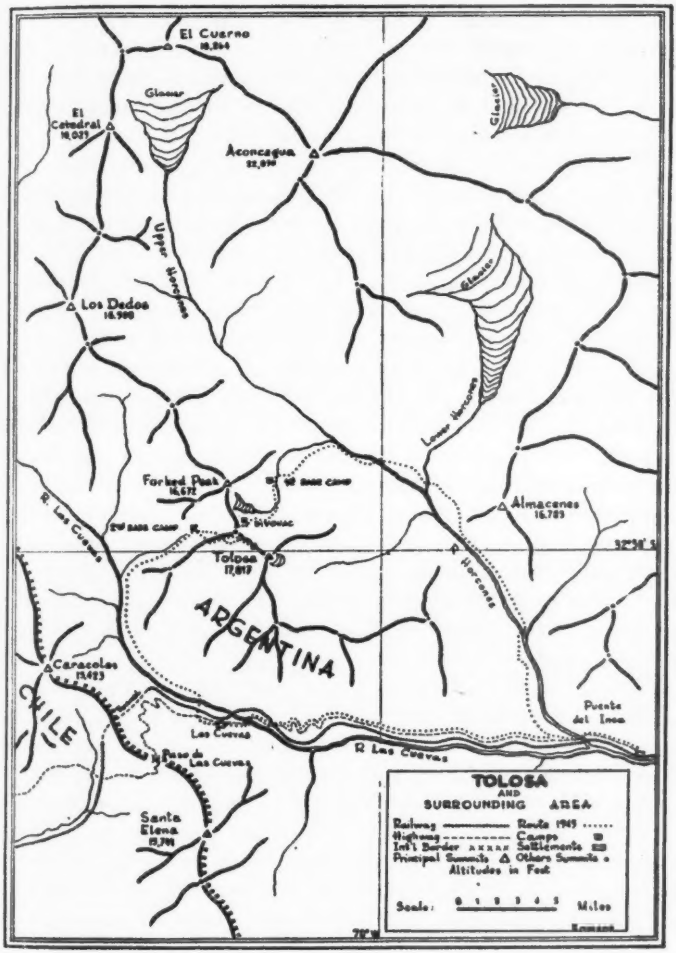
ON a previous visit to the vicinity of Aconcagua in the Argentine Andes during February, 1944,[1] our party had passed close beneath the imposing buttresses of one of the principal peaks bordering the Horcones Valley on the W., whose great cliffs and hanging glaciers dominate the lower end of this wild valley. Although one of the more accessible mountains in this area, both from the Horcones and Las Cuevas Valleys, Tolosa has received comparatively little attention from climbers. The apparent reason for this is its moderate altitude in comparison with Aconcagua, highest mountain in the Americas, whose towering ridges overawe the scene and have attracted to themselves at least twenty successful expeditions and probably many more not so successful, as the small cemetery at Puente del Inca bears grim witness. As a splendid peak, however, Tolosa still manages to hold its own, both by virtue of its steep walls and its position of relative detachment from other and higher peaks many of whose summits reach altitudes of 19,000 and 20,000 ft.

One of the earliest, if not the first, ascent of Tolosa appears to have been that of the Baroness Moyandorff, accompanied by the Swiss guide Pollinger, in 1902, accomplished from the N.E. along the main ridge rising from a col connecting with the Forked Peak. This same route was successfully followed by Mervyn F. Ryan and three English companions in February, 1925. Several further ascents were made during the 1930's, while the most recent was that of Lieutenant Emiliano Huerta, Sergeant Aníbal Martiniz, and two other companions in 1941. All of these latter ascents had been accomplished from the E. by the direct route up the couloirs which give immediately onto the summit.

As on the previous trip, I was to be accompanied by Theodore Crombie and Miguel Cáfaro, plans being made to foregather at Puente del Inca on the Transandine Railway by February 16th, 1945. This time we were forearmed with at least some previous

[1] For a description of this trip, see *A. A. J.* v, 313. The elevations now given supersede those of the first article, which were derived chiefly from the old maps of Fitzgerald.

knowledge of local terrain and weather conditions, as well as being far better equipped than on the former occasion. It had been de-



cided to concentrate our efforts immediately upon Tolosa and, if successful, we would spend anything that remained of our two weeks vacation in an attempt on El Cuerno at the head of the Hor-

cones Valley, the latter being a precautionary idea which, in the event, proved to be unnecessary.

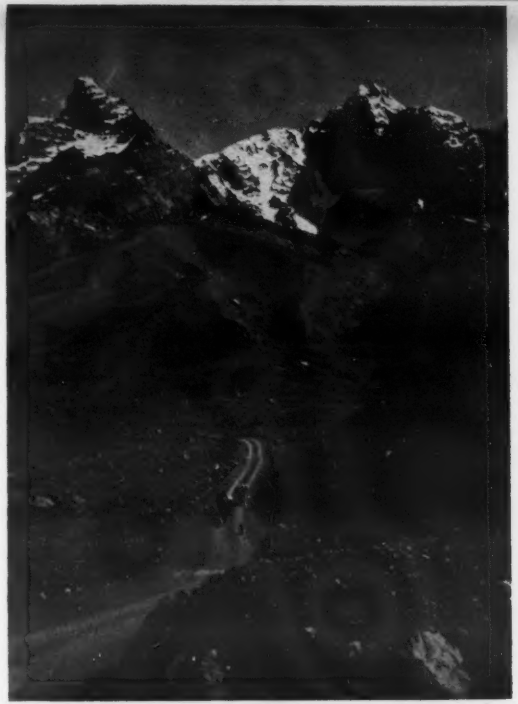
Insofar as could be determined, all previous ascents of Tolosa had been accomplished from the Horcones Valley on the E., several exploratory attempts from the S.W. and W. having been made in previous years, including one by Ryan, who told us that conditions of terrain on the Las Cuevas slopes were extremely unfavorable. We therefore decided to follow the usual route.

Accordingly, at 9.00 A.M. on February 17th, the day following my arrival by train at Puente del Inca, where Crombie had been awaiting me, we started for the Horcones with six mules, having as our baquiano Pastén, a well-known local figure who had ascended Aconcagua on two occasions and who had also been up Tolosa some seventeen years before. Unfortunately Cáfaro had been delayed in Mendoza at the last minute and was unable to join us until later.

To our surprise, the party immediately ran into difficulties with the Provincial border officials, who were not inclined to permit us to enter the Horcones Valley because of a recent decree forbidding anyone from climbing on Aconcagua without special permission from the authorities of Mendoza Province. This decree had been occasioned by the disastrous outcome of the Link Expedition of the previous year, in which four members were lost on that mountain, resulting in much expense and difficulty in efforts at rescue. However, after some insistence on our part that the two of us were not going to attack Aconcagua, but in reality only Tolosa, we were allowed through the barrier.

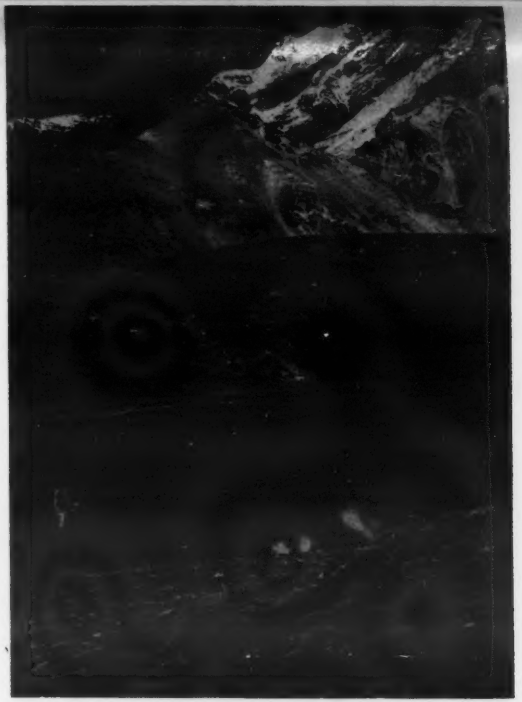
As the party turned N. into the Horcones, the magnificent southern ramparts of Aconcagua rose glistening with new snow at the head of the valley, as always truly a most exhilarating spectacle. Our riding mules made fast work of the twelve miles to the mouth of the subsidiary valley descending from Tolosa. After climbing some 1500 ft. over easy slopes, we crossed the rocky bed of the stream to the north side of this valley and set up our base camp in the shelter of a terminal moraine at an estimated altitude of 13,500 ft., six hours' ride from Puente del Inca. Pastén was requested to report back in five days and departed immediately with the mules.

We had brought sufficient provisions and fuel for our entire two weeks' stay, as well as complete equipment for at least one higher bivouac, being prepared to acclimatize ourselves and lay siege to Tolosa at our leisure. Our first setback came almost immediately



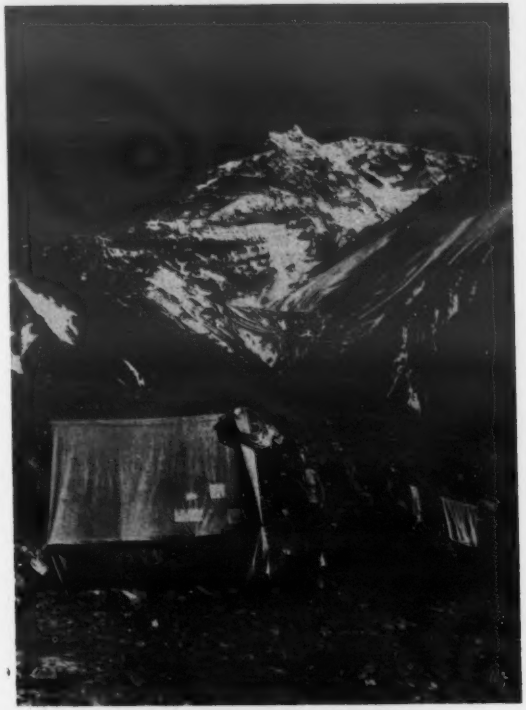
TOLOSA

(Summit on right)—As seen from International Highway in Las Cuevas Valley to S.W.

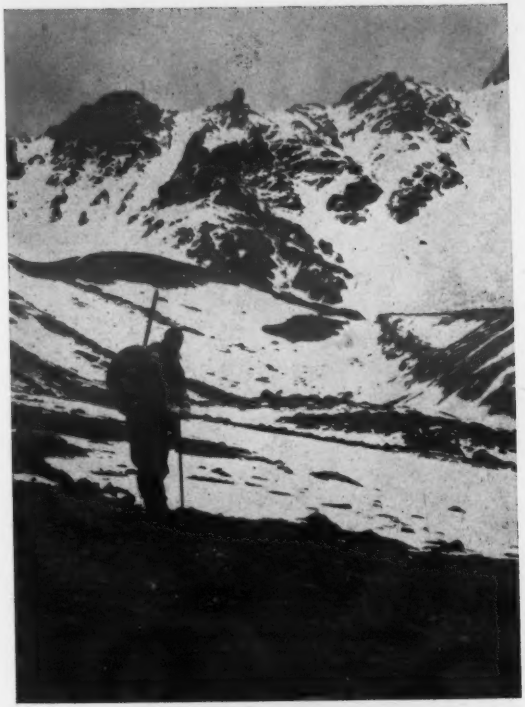


S.E. FACE OF TOLOSA (17,817 ft.) AND LAGO DE ESPEJO

Photos, A. B. Emmons



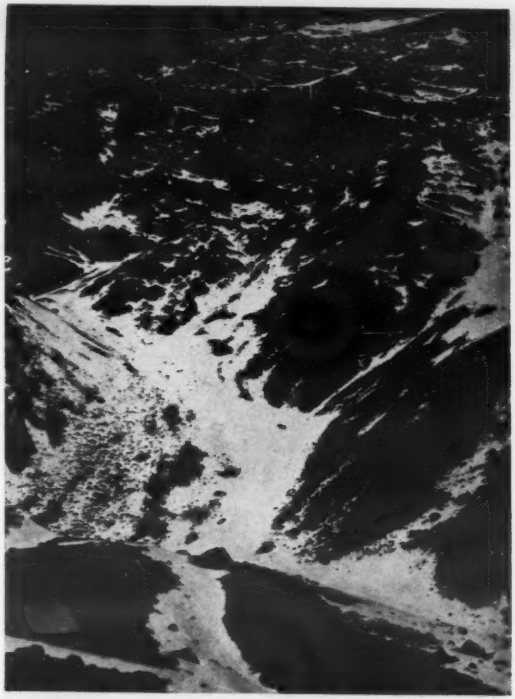
S.W. FACE OF ACONCAGUA 22,835 FT.
From base camp *ca.* (13,000 ft.) N.E. of Tolosa



EASTERN APPROACH TO COL
Between Tolosa and Forked Peak (*ca.* 15,300 ft.)

Photos, A. B. Emmons

Photos, A. B. Emmons



VIEW OF N.W. FACE OF TOLOSA FROM BASE CAMP
Route lay over terrain shown in center of photograph, following upper névé. First attempt had gained ridge on left from opposite side.

STEEP NÉVÉ AT 16,500 FT. ON N.W. SLOPES OF TOLOSA
Upper portion of Las Cuevas Valley in the background

Photos, A. B. Emmons

N. RIDGE OF TOLOSA

Seen from névé to the W. at 16,500 ft. Ridge was gained at upper right on previous attempt.

VIEW N.

From point on ridge of Tolosa gained on first attempt. Tolosa-Forked Peak col at lower right.

Photos, A. B. Emmons

Right on previous attempt.

Forked Peak col at lower right.

Photos, A. B. Emmons

when we had to spend the entire first evening battling with the recalcitrant primus stove, whose pressure cap had been repaired with solder that promptly melted off.

Exceptionally heavy snow lay on all of the upper slopes, the result of a devastatingly heavy snowfall ten days before which had closed both the Transandine highway and railway and had brought near-disaster to a military expedition then on Aconcagua searching for the bodies of the Link party. Anticipating that heavy snow in the western couloirs of Tolosa would make a direct approach to the summit difficult of not impossible, it was decided to follow Ryan's longer route from the N. col, which would enable us to attain the main ridge line at a lower point.

Leaving camp at a comfortable hour on the 18th without loads, we carried out an exploration of the approaches to the N. col at the head of the valley. After several hours over great mounds of moraine, we approached the base of the steep cliffs of Tolosa's eastern flank and turned toward the right into a basin lying at the foot of the col. Here is found a small glacier which descends from below the great multicolored towers of the Forked Peak (16,672 ft.)[2] that rise from the N. end of the col, nieve penitente being very much in evidence.

Keeping somewhat to the left of the lowest point of the col where the descending crest of the ridge was badly broken, we scrambled for an hour over very steep scree and rock slopes which put a severe strain on our untrained lungs. After half the slope had been negotiated and no site for a bivouac discovered, we made a quick descent to camp.

Following a day spent in base camp because of a snowstorm, we again set out for the col on the 20th, this time weighted down with sufficient supplies to establish a bivouac and to make our first attempt on the summit. For the first few hundred yards we were aided by the two mules brought up that morning by the baquiano accompanying Mrs. Crombie, who had sportingly paid us a brief visit at the base camp from Puente del Inca. At about 4.00 P.M. the weather, which up to this point had been fine, began to deteriorate, a heavy wind blowing through the col and driving before it snow-bearing clouds. A site for our small tent was found part way up the slopes in a tiny nook perched close beneath the towering

[2] So designated by Ryan's party in 1925.

black crags of the eastern escarpment of Tolosa. It was a sheltered spot at about 15,500 ft., somewhat below the altitude from which, because of the length of the proposed route, we had hoped to make our final take-off. After building up a platform and securing the tent, we crawled in to do battle once more with the primus stove.

The wind and snow continued throughout the night and, coupled with our lack of acclimatization, made sleep exceedingly hard to achieve. The following morning the weather appeared to be worsening, while the temperature had dropped to 22° F. When by 9.30 A.M. no change for the better seemed in prospect, we collapsed the tent and, leaving all of our gear, returned to the base camp where we found about three inches of new snow. Towards evening the weather cleared, although the high wind continued from the W., blowing plumes of snow over the summit ridge of Tolosa onto our proposed route on the lee side. At sunset we were rewarded with the astoundingly beautiful sight of the great rock walls of Aconcagua freshly powdered and now radiant with the delicate shades of the alpine glow.

On the 22nd in preparation for a new attempt, we again returned to the bivouac, which had now been nicknamed the "Nido de Pollos" (Chicken's Nest) in contradistinction to the more ambitious advanced camp of the various recent Aconcagua expeditions, "Nido de Cóndores." Although the weather had settled fair, broken late-afternoon clouds swept through the col under the pressure of the prevailing westerly wind.

The following morning we breakfasted at 6.30 and managed to get away by about 8.00 o'clock. The steep scree slopes above the bivouac proved very trying indeed and we took to outcroppings of rock where possible. After following a gully which paralleled the base of the huge rock buttress on our left for about 500 ft., we came out on a series of wider snow slopes at whose lower edge the ground fell away abruptly. We were now well above the N. col, on the other side of which the rugged pinnacles of the Forked Peak hemmed in the valley head. As the gradient now became steeper and heavier snow was encountered, at times with ice beneath, we put on the rope.

Progress from here on was slow, particularly as a series of upward traverses had to be made to a point where the ridge could be reached above its most serious interruptions. The going was extremely heavy and at noon we were still below the crest. At

this point I attempted to cross one particularly steep open slope composed of six inches of powder snow lying on a thin crust. Underneath this was a bottomless welter of unconsolidated drift into which I soon sank almost to the neck and from which I could extricate myself only with considerable difficulty, despite a secure rock belay from Crombie. The evident danger of a surface peel, as well as the sheer physical effort involved, caused us to abondon this line, and we were forced to continue to the ridge 200 ft. above by means of some steep rocky ledges along the base of a jutting wall.

The ridge at this point, estimated at about 17,000 ft., was extremely narrow and dropped away sheer on the farther side (W.) into a deep couloir. After following the crest for about twenty yards, we stood beneath a tower which cut off further direct progress. I attempted to turn the tower on the W. but soon observed that the ridge beyond could not readily be regained because of ice-covered slabs. On the E. the side of the ridge rose in an unbroken wall from the névé which we had attempted to cross.

By persistent effort a way could undoubtedly have been forced around this obstacle. It was now 2.00 P.M., however, and we were still well below the northern shoulder of the mile-long summit ridge, whose entire length was yet to be traversed, including several difficult pitches known to have been encountered by the Ryan party. Furthermore the wind was rising sharply and bringing with it clouds from the Pacific. Retreat was decided on and, belaying one another down over the abrupt rock and snow of our laborious ascent, Crombie and I returned to the bivouac two hours later in a gathering snowstorm.

All hope of following the Ryan route and of climbing Tolosa from the Horcones side was now abandoned, in view of the very bad snow conditions which had prevented us from following his essential series of traverses along the slopes under the eastern crest of the final ridge. On the other hand we reasoned that the prevailing westerly winds would either have cleared the recent heavy snow from the western (Las Cuevas) side of Tolosa or at least have consolidated it to a greater degree than on the E. Although such information as could be obtained relative to the feasibility of an approach from the Las Cuevas Valley had all been negative, it was decided that there would lie our best chance under present circumstances. Accordingly, after an uncomfortable night of wind,

cold, and snow at the "Nido," we struck the bivouac and returned to the base camp with heavy loads by 1.00 P.M. on the 24th.

There we found Pastén and the mules, as per arrangement and immediately packed up camp for descent that same afternoon to Puente del Inca, to which we must return on our swing around to the W. of Tolosa. About five miles down the Horcones we met Cáfaro on a mule coming to join us, and the entire party continued on to the delightful comforts and food of the hotel.

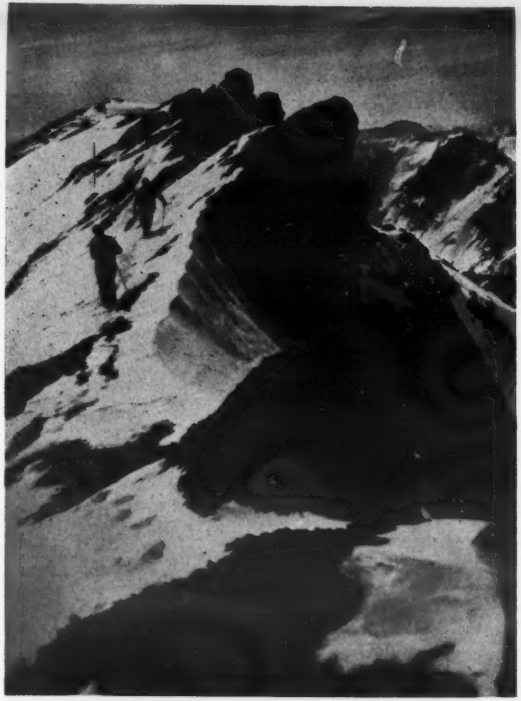
A day of luxury and leisure was spent at Puente del Inca, including a bathe in the mineral hot springs for which the place is well-known. Only pessimistic reports were received from all with whom we consulted at the hotel regarding the western approaches to Tolosa, including Pastén. Cáfaro, however, had made a short trip into the upper end of the Las Cuevas Valley a few weeks before and he, at least, believed that it might provide a feasible route.

Pastén appeared at 8.30 on the morning of the 26th with our six mules, while eight nondescript dogs followed in his wake, something of a record even for local "volunteers"! We had a long ride ahead of us and pushed on up the Transandine Highway at a brisk pace under beautiful clear skies. Ahead rose Santa Elena (15,744 ft.), the often-ascended peak which stands above the Christ of the Andes in Las Cuevas Pass.[3] We lunched at the barren little cluster of houses known as Las Cuevas, last settlement on the Argentine slope of the Andes and near the point where the railway plunges into the tunnel under the pass. To the W. the highway climbed out of the valley in a series of sharp switchbacks to the continental divide, while immediately above us to the E. towered the jagged rock pinnacles and hanging glaciers of Tolosa's western defenses.

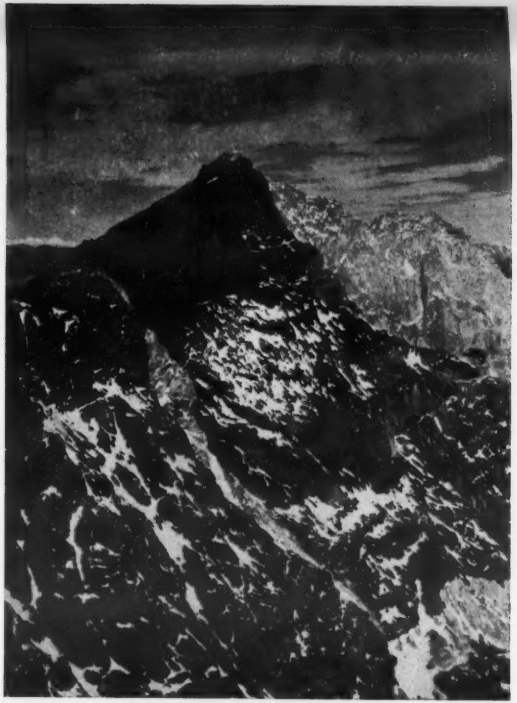
A few miles beyond the settlement of Las Cuevas, the valley widened into a lovely upland swale, now green as a result of the recent snowfall, and hemmed in on all sides by fine snow-and-rock peaks, many of them constituting the watershed between Argentina and Chile, conspicuous among which rises the great wedge of Caracoles (15,423 ft.). The character of the country in the upper Las Cuevas differs markedly from that of the Horcones region, being less severely stark and more alpine in its feeling. Crombie and I were thoroughly captivated by this new scene.

As we passed to the N. W. of Tolosa, a side valley opened to view on the right, descending evidently from the N. col upon the

[3] Also called the Uspallata Pass.



SUMMIT RIDGE OF TOLOSA LOOKING N.
Highest point is to the S. and not visible



S. SUMMIT OF TOLOSA (LIGHT COLORED ROCK) AND GAP
As seen from ridge below N. summit
Photos, A. B. Emmons

other side of which we had made our first attempt. Turning into this valley, the mules had a hard time in gaining an entrance because of the steepness of its initial slopes. However, after several hundred feet of scree lying at a high angle, the valley floor leveled off to some extent. Climbing along the lower edge of long cones of talus originating from a shoulder of Tolosa on the right, the mules experienced considerable difficulty in avoiding successive hillocks of rocky valley moraine. After an hour and a half, and despite the increasing grumblings of Pastén, we finally reached the upper basin beneath the col and at the foot of the N.W. face of Tolosa, where deep snow bogged the mules and prevented further advance. We had been in the saddle for seven hours and were glad enough to dismiss the mules and the eight dogs and set up base camp on a dry spot of moraine at about 14,000 ft.

The N.W. face of Tolosa from this aspect appeared rather formidable, being composed of a broad rock face more than three thousand feet high, cut vertically by deep couloirs and ragged aretes and broken, at intervals, by a series of slanting transverse terraces and slabs. Running along the top of the face was a steep rocky lip which cut off the view above. As we approached it from a distance, I had tried to make out a tentative route with the binoculars, following a series of snow leads up the center that seemed to indicate broad ledges and which finally appeared to connect with an expanse of névé below the final skyline wall. The face was enclosed on the left by the formidable ridge rising out of the N. col and on the right by a massive formation of sharp rock pinnacles and boilerplate, falling steeply away for a thousand feet or more. We were subsequently to have reason to remember this latter formation!

By 5.00 A.M. on the 27th we were breakfasting on food prepared the evening before and kept in thermos flasks. At 6.00, still in comparative darkness, the party began the long grind up the scree slopes a few yards from camp at the base of a great couloir. The temperature was 22° F., the sky clear, and no wind. Conditions were excellent, the snow crusted, even the scree being frozen. We made good time to the point where the couloir petered out onto some slabs 600 ft. above, and then swung to the left onto an arete which, to our dismay, soon brought us to the edge of a deep cleft whose near side overhung, and which had been completely invisible from below. These clefts were a curious and annoying feature of this part of Tolosa, being formed by the exposure and fracturing

of successive layers of durable rock at a steeply-inclined angle and dipping sharply towards the W.

After a little reconnoitering, I managed to discover a break through which descent could be made to the bottom of the rift, where the soft snow that had collected there caused us considerable annoyance. Once across, a steep series of cracks and ledges permitted us to surmount the opposite wall and regain our altitude with the loss of about half an hour.

From here on, after one or two short pitches of rock, the series of snow leads which I had studied from below stood us in good stead, and as this side of the mountain was still in the shadow of the N. ridge, we pushed on as fast as possible in order to take advantage of the excellent footing afforded by the frozen névé. By 10.00 A.M. a point was reached just below a horizontal band of precipitous rock some 150 feet thick through which there appeared to be a thin crack at the top of our present snow slope. Since the welcome light of the sun had by now found our position, a few minutes' halt was called for a second breakfast.

Until now the party had been unroped, but as the gradient of the snow now increased to about 50°, with an abrupt drop-off below, we decided to rope up. I took the lead and found some difficulty in gaining a lodgement in the break in the wall, which was steep and lined with ice. After cutting steps for 75 feet, I secured a good belay and the other two joined me. This process was repeated and we emerged at the foot of the extensive upper névé for which we had been making.

Continuing on with as much speed as possible to make maximum use of the crust before it softened, we kicked steps diagonally upward, making for a break in the skyline wall below and to the W. of the northern apex of the main summit ridge. The snowfield proved much more extensive than had been anticipated and we began to run into pockets of powder snow which slowed us up appreciably and cost us much effort.

At the top of the snow slope far worse going was encountered. Here the steep upper walls of the face had been badly fractured and in the cracks and gullies the powder snow had collected to great depth. We floundered upwards for over an hour, taking to the rocks where possible, but receiving heavy punishment in our flagging energy. Our altitude was approximately 17,000 ft. and we could look across to the point on the sharp N. ridge which Crombie and I gained on our previous attempt.

It was 3.00 P.M. before the party finally gained the skyline ridge that descended to the N.W. from the summit crest line. The upper part of Tolosa from this position resembled a Chinese tile roof, with a wide field of snow lying on its gentler slope, below the eaves of which the mountain dropped away for thousands of feet out of sight into the Las Cuevas Valley, while the top of the roof was formed by the summit ridge on our left. We traversed at our present height for several hundred yards in waist-deep snow to a rib which had been blown clear. This soon brought us to the final summit ridge near its N. end, joining Ryan's route perhaps a mile from our ultimate objective, although with little difference in elevation yet to be covered.

Fortunately the weather remained clear and there was little wind to worry us. The crest was narrow and broken by sharp outcrops of conglomerate rock which were passed on the W., the eastern slope dropping away abruptly for almost its whole length. Three quarters of an hour after reaching the crest we passed just below a prominent pyramid of rock constituting the N. summit, and were suddenly brought up all-standing at the brink of a gap several hundred feet deep that cut through the ridge at this point. Beyond rose sheer walls of black and yellow rock which appeared to cut off completely all access to the great surmounting blocks that form the S. summit. From Ryan's description we had been warned of this gap, but were not prepared for its size nor for the obvious complexity of crossing it.

There followed a council of war during which it was unanimously decided that, due to the lateness of the hour and the long and complicated return trip which must be made, we should not risk going farther. It did not cheer us to know that the gap had been crossed by former parties as, at 5.00 P.M., we dejectedly ascended the last few feet to the top of the pyramid above us, approximately 18,000 ft. above sea level.[4]

[4] Argentine War Ministry (Instituto Geográfico Militar) maps show the slightly lower figure of 17,817 ft. for Tolosa, although the figure of 18,040 ft. was given to us by an official of the Club Andinista de Mendoza as being the one accepted locally. No accurate comparison appears to be available as between the N. and S. summits, although Martínez stated that his observations by aneroid led him to believe that the summit which we reached was slightly higher. Lacking instruments, we could make no claim in this direction. In general, the altitudes given in this article follow various aeronautical charts based upon data from the American Geographical Society, although other sources have been used where necessary. There is frequently a considerable disparity as between the altitudes indicated on the various published maps of this region.

From this point the S. summit appeared to be of almost exactly the same altitude, perhaps a hundred feet higher, although we had no means of direct comparison. To our surprise, here we found the "summit book" of the Club Andinista de Mendoza in which had been inscribed the names and experiences of those who had "successfully reached the top of Tolosa!" (*sic*) In addition, there were several small flags and other mementos, signifying that at least some mountaineers considered this the actual summit, a particularly interesting fact since their ascents had been made from the Horcones Valley where the route gave them complete freedom of choice as between the northern and southern points. The last signatures in the book were those of Huerta, Martínez, and their companions, who made the ascent in 1941. We could find no evidence that any party had climbed Tolosa from the Las Cuevas side, ours apparently having been a new route, at least as far as the record showed.

The view from Tolosa was superb. Aconcagua (22,835 ft.) rose impressively to the N.E. about ten miles away and, even at that distance, seemed to overshadow us. The great mass of Tupungato (22,300 ft.) could be seen far to the S. standing well above its neighbors. Looking S.W. in Chile a fine array of snowcapped peaks, culminating in Nevado del Plomo (19,849 ft.), and in the beautiful snowy symmetry of Los Leones (17,847 ft.), lay spread before us, fading towards the horizon into the grey-blue of the distant Pacific lowland. Far below, in Las Cuevas Pass, the binoculars picked out the Christ of the Andes silhouetted against the snow, while many miles to the N., beyond El Catedral (18,023 ft.) and El Cuerno (18,264 ft.), could be distinguished the massif of Mercedario (21,883 ft.) third highest mountain in this part of the range.

After spending nearly an hour in taking photographs, eating a light lunch, and inscribing the "summit book," we retraced our steps along the crest in a rising wind. At the northern end we turned left down along the N.W. shoulder, skirting the face up which we had climbed that morning and determined to find a more direct and less complicated route down. We passed the heads of several deep couloirs, but rejected them as they looked steep and icy. Proceeding on down the shoulder, we were finally forced onto the face by the impassable walls of the great rock barrier, mentioned earlier, which cut across the ridge.

The descent was then continued through a maze of steep inter-

PEAKS OF THE ARGENTINE-CHILEAN BORDER
At the head of the Las Cuevas valley

FORKED PEAK
N. Col of Tolosa at lower left

Photos, A. B. Emmons

ACONCAGUA FROM SUMMIT RIDGE OF TOLOSA
El Cuerno (18,264 ft.) is in left background, with Forked Peak below

VIEW W. INTO CHILE FROM SUMMIT OF TOLOSA
Showing Los Leones (glaciated peak) and Santa Elena (center foreground) with Paso de Las Cuevas at lower right on which is the famous "Cristo"

Photos, A. B. Emmons

connecting gullies cutting downwards through the great slab formation. As one gully petered out, we crossed into the next, until finally at 8.00 P.M. we found ourselves in a cleft 50 ft. deep whose true left-hand wall completely overhung us. It was now getting really dark, and the unpleasant realization struck the party that we were to be benighted in a rather unsavory situation, our altitude still being about 16,500 ft.

Working our way carefully down the snow-lined cleft for several hundred feet, it finally took a plunge over a precipice into the darkness below. There was nothing to do but to retrace our steps upwards until we could discover a break in the side wall of the gully. This I found in the form of a small ledge running horizontally outwards around the overhanging wall. Leaving my rucksack to be pulled up later and standing on Cáfaro's shoulders, I managed to gain lodgement on the ledge, which was narrow and without adequate handholds, Crombie belaying me from farther up the gully. After about 20 ft. the going was easier, although in the dark I could not see what lay ahead. Reaching the lip of the gully, I found a good stance and soon brought the others up to it.

Unfortunately the sky had begun to haze over and the moon, which was nearly full, had not yet risen. We now took stock of our situation and despite the fact that we had both provisions and warm clothes, rather than spend a night out it was decided to try to force a descent over the great slabs of steep boiler-plate which we believed lay beneath us. Unfortunately our one candle-lantern shed such a feeble glow that it was of no avail in the wild vastness of that dark mountainside. I decided to make an exploratory trip onto the slabs below on the end of our 120-ft. rope, firmly belayed by the other two. This procedure immediately began to yield results, for by following small snow-filled cracks, even in the dark I was able to make considerable satisfactory progress along a downward slanting traverse.

After belaying Crombie and Cáfaro to my position, one man moving at a time, we worked our way, rope-length by rope-length, down over 600 ft. of slabs, following small fissures in the rock and praying that they would not give out on us. But our luck held and at 10.30 P.M. when the moon came up behind the haze, our advance became more rapid. Long periods of standing in one position, holding a belay and trying in the darkness to direct those above to obscure hand- and footholds, was very cold work, and each of us

breathed a sigh of relief as we climbed off the last pitch and stepped into a broad couloir at 12.30 in the morning. The remainder of the descent was made over long but easy snow and scree slopes, and the party reached the base camp at 1.45 A.M. after nearly twenty hours of almost continuous climbing. Being hungry, thirsty, and cold, we brewed ourselves a most efficacious hot potion before turning in.

The following day was one of ease and curing blisters, and of sunbathing, for our ambitions towards the array of fine peaks surrounding the camp were easily satisfied from a comfortable stance on the valley moraine. Pastén and the mules turned up early on March 1st by prearrangement, and we regretfully struck camp. The long ride down the Las Cuevas Valley to Puente del Inca was both nostalgic and, at the same time, filled with pleasant anticipation for the comforts of civilized life to which we were destined to return for at least another year.

At the hotel that evening we met Sergeant Martinez, who had just come back from a successful ascent of Aconcagua as a member of an Argentine military party of six men, led by Lieutenant Emiliano Huerta. A few hundred feet from the summit, they had discovered the bodies of Juan Link and his wife lying frozen on the open slopes, evidently where they had collapsed from fatigue during the great storm of that fateful 17th of February, 1944. The bodies were left there. From the records on the summit, it was discovered that the two climbers had, in fact, reached the top of Aconcagua. No evidence of Kneidl, the fourth member of the party to perish, could be found (the body of Schiller was discovered by Cáfaro last year).[5]

We were told by Martínez that he believed from his experience that the N. summit of Tolosa was the higher, although he had ascended the S. summit as well. He further confirmed the impression that ours had been the first ascent of Tolosa from the W. Unfortunately such local mountain records as exist apparently could not shed any light upon those two issues. Nevertheless, our holiday had remained most interesting and enjoyable, and any sleepless nights which we may have passed were not occasioned by a serious preoccupation with such technicalities.

[5] See *A. A. J.* v, 321.

Rambles and Mountain Climbs in Various Parts of the World

WALTER D. WILCOX

THE writer has been asked to compose an article on his various mountain climbs and adventures, omitting any reference to the Canadian Rockies, his favorite and most cherished part of the world and with which incidentally he is most familiar.

It was anticipated that the gathering of old memories and writings and the study of photographs, time-worn and faded through the lapse of years, would yield a poor and scanty harvest. Much to the contrary and likewise much to my surprise, the mere hasty reading of old diaries, letters and possibly some former magazine articles often brought a greater thrill than the original adventure.

1. The Awakening

From both parents I inherited a keen interest in nature and the great world of outdoors. My father was born in the town of Stockbridge, Mass., and my mother came from Braintree of the same state. Horace Greeley's advice: "Go West young man," was followed by my father who moved to Chicago in the early days. Here he laid out all the West Side Parks and Boulevards, the nearest approach to nature in a large and growing city.

My father's library was a constant and inspiring delight. Books by the great navigators, explorers and lovers of nature made up the greater part of it. One child's book called *Chatterbox* had in it an illustration entitled "The Mountain," that held me spell-bound hour after hour. It was an ordinary forest-covered mountain with a bare rocky summit but I could, in imagination, find my way through every twist and turn to the summit and then try to imagine what distant horizons might be seen from that lofty viewpoint. How many times have I repeated this day-dream in after life!

My mother, unduly anxious as are many mothers, got the idea that I was somewhat of a weakling and did everything possible to overcome this failing. At five years old I must needs take a daily walk of a mile or two and increase this amount one mile for each year of my age. I finally got the record up to 35 miles in a day, which I thought enough at the time, and do so yet.

The needs of a broader education and contact with a wider acquaintance led my parents to send me to Racine College Grammar School, 60 miles N. of Chicago, when I was eleven years old. The school buildings were located on high land overlooking the lake. This bluff rising out of the water was about 50 ft. high and was formed of a hard, blue clay in the lower half and a loose sand in the upper part. Constant erosion by the beating waves caused frequent landslides and, as there was a graveyard just south of the school buildings, it was no uncommon sight to see skulls and bones rolling down the slope as some ancient worthy moved his last resting place to a new home.

While the standard of manners and social customs amongst the pupils probably averaged as high as other schools, there were occasional examples to the contrary. One day, while lost in admiration of the vast expanse of Lake Michigan, the slow moving sailing ships, the seagulls and the breaking surf, some evil-minded Wisconsin farmer's son sneaked up behind me, unseen and unheard, and gave me a violent push that sent me bouncing all the way down the bluff to the water's edge. This was my first glissade, but I managed to stay upright though I never discovered the miscreant who perpetrated the deed.

Up to the time when I was twelve years old I had never seen a mountain nor could I form any proper idea of one except by pictures and photographs. No chance could have been more propitious and soul-inspiring than my first view of a real mountain. It came about in this manner. My father and mother being nature-lovers themselves, as the reader may imagine, took me to the White Mountains of New Hampshire. We arrived in heavy fog and rain. In late afternoon the sun broke through the clouds, the bushes sparkled with diamonds as sunlight hit the rain-drops, and my father suggested a walk through the woods, now fragrant with the perfume of evergreens.

As we were walking along by a rushing torrent a strange feeling of an approaching surprise and pleasure overcame me, and looking upwards, I saw the "Great Stone Face" so beautifully described by Hawthorne, on the very summit of Profile Mountain. It was wreathed in mist and slowly moving clouds and no doubt nothing in his life so much touched my nature-loving father as to see this trait revealed in his son.

Next day we went for a long walk through the woods and after

some time we came to an Indian encampment, where they were selling beaded ornaments, baskets and other trinkets. One of the Indians, tall and straight, and of such nobility that he might well have been a chief, took a great fancy to my father and talked considerably with him. And this leads up to one of those mysteries and chances of life for which there is no explanation. He was fascinated with a fine and heavy gold watch which my father was wearing and examined it for a long time. Then, at last, he took the watch in hand, assumed a serious expression and speaking slowly said: "This watch very good. Very heavy. Me see deep, deep water. Very cold. One day this watch take you down, down!"

Two years later my father, while on a fishing trip at Lake Superior, the largest and coldest fresh-water sea in the world, was overturned in a canoe, while wearing the same watch, and his body sank in those icy waters that rarely or never give up their dead.

2. *Walks in the Alps*

Passing now to a period a few years later, while I was still very much of a youngster, I went in company with my mother to Switzerland where a Swiss guide named Pius Reichenbach was engaged to take me on long walks, some of them very long, over such passes as the Gemmi which we did two or three times and also the St. Bernard, where we spent a night amongst the monks, the dogs, and the fleas.

Guide Pius was a good old soul and he wore the regular Swiss walking costume and carried the usual tourist alpenstock with a curved chamois horn at the top. I had always imagined that this horn was not merely an ornament but was used to reach up and snag a root or crag of some kind and so help to support the weary climber from one high point to another still higher; but it seems that the chamois horn only being set in with mucilage or glue, was not of much avail under strain and its chief office was to increase morale while having your picture taken. Guide Pius was noted for selecting the most nearly level routes through the mountains and stopping at each and every wayside stand where *Limonade* and various other drinks were furnished for the weary traveller. No doubt he more or less surreptitiously slipped in some fortifying element when I was not looking that added much to his speed

and good humor. Anyway we got on famously and after two or three weeks I came back good and strong to my mother, who felt that she had made an excellent investment.

3. Adventures in the Hawaiian Islands

During the time that I was at Yale, that is from 1889 to 1893, there were quite a few students from the Hawaiian Islands. This was natural, as Yale had sent the first missionaries to the islands in previous years and there was a common bond of interest and gratitude between them. Amongst the so-called "Islanders" I found many friends and was often invited to their special dinners where unusual items such as *poi*, the mashed-up and half fermented root of the taro plant were served. It is said to be exceptionally nourishing and even a tasty food, which, after years of practice, may be the case.

My interest having been aroused in the islands by so many friendly gatherings, I took the first opportunity after graduation to visit them, and landed in Honolulu in 1893 and subsequently was royally entertained by my college friends.

The islands are a paradise for the mountaineer, the explorer and the nature lover whether it be in the line of geology or botany or even the gentle art of photography. Both geological and botanical research prove that the islands rose from the sea, and an excessively deep sea, in a line of weakness in the earth's crust running S. E. from Kauai to Hawaii, the largest island. Here is the great mountain of Mauna Loa (13,675 ft.), the largest volcano in the world, its base 75 miles from N. to S. and 50 miles from E. to W. To the N.N.E. it merges with Mauna Kea (13,825 ft.), the latter the highest island mountain in the world, and in a real sense the highest of all mountains, starting as it does from a great plain 18,000 ft. below sea level and rising to nearly 32,000 ft.

On Mauna Loa's E. slope is the crater of Kilauea, the largest active crater in the world, with an area of four square miles and walls 400 ft. in height.

One of the first of my college friends that I ran up against was Willow Baldwin, in the northeasterly island of Kauai, the botanist's paradise and delight of the artist and photographer. Unfortunately, prohibition being in power, we had to pull down the shades and lock the door in order to enjoy a glass of beer. I took

a walk of many miles along the high-level trail that traverses the N. shore of the island. This is not only a long walk but a series of mountain climbs as well. Every time one has opportunity to look down 1000-1500 ft. to the raging Pacific far below, some torrent or mountain stream compels a descent to sea-level. Then ensues another climb, and so successively till the weary traveller can endure no more.

But Hawaii, the largest and most southerly island, was in some respects my favorite, perhaps due to the lovely little settlement called Hilo on the S. E. corner of the island. This is a place to stir the heart of the ambitious photographer, with its reed-bordered lagoons, the Chinese fisherman hauling their seines on the white sandy shores and the out-rigger canoes far at sea and returning with their cargoes of fish freshly caught. But to reach it one must needs take a coastwise steamer along the rocky and storm-beaten shores of the great island of Maui. Here there are practically no ports along the stormy and rock-lined coast, but the passenger must be lowered in the darkness of night and seize, if he can, the propitious moment in which to jump into the arms of the sailors in the boat far below, rather than into the hungry maw of a shark which has been waiting for one all day. Even so, you are far from shore. The pale glimmer of distant lights leads the way through the narrow channel in the reef, breakers white in foam threaten on either side, and one prays that the sailors may have the good luck and skill to reach the safe harbor.

But the danger is far less than the terrified traveller imagines. Of all peoples of the earth probably, the Hawaiians have longest been acquainted with the sea. Their ancestors, many centuries ago, came in canoes hundreds of leagues across the sea from Samoa, and the Samoans in turn, from Java while some imaginative writers believe that the Javanese trace back to the lost tribes of Judah.

While at Hilo, entirely engrossed in the pleasant work of photographing the many unusual and picturesques scenes available on every side, a large delegation of U. S. Congressmen arrived and proceeded at once to the crater of Kilauea, where by a freak of fortune that might not be repeated in the next 10,000 years, the volcano suddenly broke out in an eruption on the fourth of July.

And here it was that I made one of the four or five hundred inexcusable mistakes of my life. Thinking that the matter of eruptions was one of long delay and equally long duration I dallied

around Hilo to finish up some special shots that I had reserved as a climax of my work. The very day I reached Kilauea the fires went out, the lava turned to stone and I had lost the chance of a lifetime to witness one of the world's greatest and most spectacular wonders.

While the island of Hawaii has its special features, Maui to the N. W. has one, that in some respects equals or even excels, all the others. This is the great crater of Haleakala (House of everlasting fire), the largest in the world and only exceeded by some of those on the moon, which unfortunately we cannot visit. It is 20 miles in circumference, nearly 2000 ft. deep and its rim in some places rises to 10,000 ft. above sea level.

Some of the Baldwin boys, sons of Judge Baldwin of Honolulu, and other friends arranged a trip to the great crater for me. The Baldwin family have immense holdings of sugar-cane lands on Maui, and one can ride for hours through the vast and almost endless fields of cane in every stage of growth and beauty.

Our trip on horseback involved a long and sometimes tedious climb, first through the lowlands, then the upper cane fields and at last bare rocky slopes and semi-barrenness as we neared the topmost edge of the crater. As one stands for the first time on the sharp crest of the crater the impression is, at first, not so much of wonder, but rather a kind of admiration mingled with terror. No such view, possibly, may be obtained elsewhere on our globe. But we were to see it in still more awe-inspiring circumstances. We had little time to spare before nightfall to arrange the interior of the stone hut in which we were to pass the night. Firewood had to be split, shavings prepared by some, while others sliced the ham, put on the soup and arranged the beds. It was bitterly cold and we were to endure a still colder night, for the stones in the walls were so full of holes that there was almost more space for ventilation than protection. All night long some one was prowling around, trying in vain to light the fire, take a smoke or asking questions as to why they had come on such a party. But every night has an ending and the view at dawn was worth all our labor.

While the previous day had ended amid calm and a clear, blue sky, we now could look out over the vast crater, and in the opposite direction towards the sea, at an endless procession of weaving clouds sweeping in the trade-wind towards us, and but little above our heads, out and over the black basin of the aged and worn-

out volcano and perhaps the entire island of Maui. But the awe-inspiring cloud bank was no warning of foul weather, and shortly after breakfast the blue sky appeared here and there till at last the whole crater was in full sunshine.

There is little of color throughout the whole vast extent of Haleakala. A reddish-yellow tone prevails here and there, but the greater part of the view is almost black. In the middle of the crater is a small volcanic cone perhaps 1000-1500 ft. in height. Not far from it one can, with patience, make out the form of an ancient volcano partially submerged by lava flows and cinders. But we were anxious to get nearer views of these wonders. We were to camp for two or three days down in the depths of the crater and have time to rest and to explore. No one can safely visit the depths of the crater unless he has knowledge of the so-called "water-holes" in the mountain side, where rain water in previous storms has collected in shallow or fairly deep pockets and sometimes remains indefinitely. Water is needed in quantities, for cooking, washing and more than all for the horses, which have suffered more than they deserved in the long hot ascent of the mountain.

We spent three days in the crater depths and had time to explore various wonders in the way of strange lava formations, miniature craters and incidentally enjoy some attempts at Alpine work in the well-nigh perpendicular walls of the crater.

Of vegetation there is little of variety or abundance, but some strange and unusual species of cactus and drought-enduring plants may be found here and there. One exceedingly rare plant, related to the lily family and growing five or six feet high is said to have no relatives in all the world except on the west coast of Ecuador in South America. One could spend a lifetime speculating on how this lonely plant may have travelled so far from home to find here just as bad an environment as it had enjoyed or rather suffered in its native land.

4. An Ascent of Mt. Hood

In the course of travels in our far western states, I took great interest in the long line of inspiring volcanic cones, Rainier, Hood, Adams, Shasta and the lesser peak of St. Helens, which form a majestic line running southward from Washington to California, parallel to the coast but at some distance from it. All of these

peaks are more or less surrounded by dense coniferous forests and all of them rise up to the realms of perpetual snow.

One peak in particular has a special interest due to the fact that it still shows evidence of the ancient volcanic fires which raised it so far above the sea in past ages. This is Mt. Hood.

In the summer of 1890 I was returning from a trip to Alaska and California, and a side digression to Mt. Hood seemed to be a tempting and very reasonable possibility and one well worth proving. In those days it was no easy matter to reach the mountain's base, involving as it did a long railroad ride and a still longer and more tiresome carriage ride over roads deep in sand till, at length, the little Cloud Cap Inn on the E. side of the mountain is reached. This name is appropriate and is used in many similar places in various parts of the world. In front of the inn, to the S. and E. was a broad and open expanse of gravel washes and sharp-ridged moraines, leading the eye to the snow-fields and glaciers of the highest peak of Mt. Hood.

Among the guests at the time of my visit there were several young college students, and a young, attractive girl, whom I suspected might be the sweetheart of the manager. This subsequently proved to be the case. After two or three days and when everyone had become acquainted, the proposal was made to climb the mountain. The manager of the inn, a skilled mountaineer, was to be our guide.

A little before dawn of the appointed day and in costumes more appropriate to miners or timber-cutters than mountaineers, we made ready for departure amidst a last minute scramble to find leggings that matched, shoes that were properly nailed, and such other articles as are never missed until one arrives on the mountainside amidst icy winds and showers of hail or snow.

There was little of order or discipline during the first hour or so, our guide wisely deciding to let the youngsters go their own pace where there was no danger and eventually calm down when there was need of caution. The amount of energy expended in dislodging great boulders and make them roll down the steep moraines to burst into a thousand pieces as they hit the bottom was keenly regretted when we got 5000 ft. higher.

Several hours later we began to ascend steep snow slopes as we drew near the summit and here we roped up, our guide leading, "Sweetheart" next, and the three men, of whom I was last. Not

far from the summit we came to a steep snow couloir which descended between two rock walls from the point where we stood some 3500 ft. to the flats near the inn which appeared like a pin-point in the distance. It must have been a terrifying sight to the inexperienced girl in our company even though the guide cut very deep and well-made steps to give her courage.

At the most critical point our positions were as follows. The guide was on the far side of the couloir as the young lady reached the very deepest and central angle of the couloir; then on the other side were the two college boys and myself last. As the reader may possibly imagine this was the crucial moment when with a scream "Sweetheart's" feet flew out from under her and she started towards the valley far below. "Hang on, hang on," shouted our guide, anxiety and terror in every feature. Needless advice. One might as well have tried to throw a cat down a cistern as to get that girl to let go the rope, which in any case was safely looped around her waist. Shortly after, we were through the perilous moment, and scaling a steep snow slope that led to the final crest.

The view from the summit is one that must be studied with care and in quiet contemplation. Perhaps from no other mountain peak in the world can be seen such a vast expanse of dense and continuous forest. The State of Oregon produces more lumber than any other State and fully half of all the Pacific States of Washington, Oregon and California. Veiled in the ever-present blue haze of forest fires, the distant horizon carries the eyes to what the imaginative climber may imagine, or at least hope, may be the shores of the Pacific Ocean. The almost unique feature of Mt. Hood's highest peak is the presence of steam vents here and there among the black rocks and perpetual snow, reminders of the ancient volcanic fires that raised the peak so far above the sea.

When half-way down our mountain and with the moon's last-quarter crescent rising in the eastern sky, our guide asked me to go ahead and advise the cook and maid to prepare dinner against our speedy arrival. Years of practice in similar glacial terrain, requiring only patient care, soon brought me near the inn. It was about three in the morning when I was near enough to give a shout and proclaim to the maid and cook that our party was safe and sound. Expecting them to throw their arms about me in their relief and joy at my safe arrival, they gave instead, one shriek of terror and dashing back into the building, bolted and locked the door.

I had completely overlooked the fact that all during the day I had smeared my face with vaseline and lamp-black as a protection against sunburn, and this wearing off in spots, and showing white pallor of fatigue beneath, made me look like something long since buried and dug up. Only persuasive words and gentle tone of voice gained me entrance at last.

We had our dinner at breakfast time, and our breakfast at lunch time next day, but it was a happy and congenial group that gathered around the table. Some time I hope to go back and have Sweetheart's son guide me up Mt. Hood and have another look at that fearsome couloir and the vast panorama that was a reward for conquering it.

5. Rambles in the Pyrenees

One of the unforgettable triumphs of my childhood days was when, as a youngster of five or six, the teacher of our geography class asked the question, "What range of mountain forms the boundary between Spain and France?" No one could answer till the question came to me at the bottom of the class, my customary place. "The Pyrenees," said I. "Right. Go to the head of the class!" I have always loved the Pyrenees ever since. The name itself is worthy of a place among those sonorous and musical names such as the Dalles of the Columbia, the burning Ghats of Benares, the Steppes of Russia, the Nizam of Hyderabad, the Dey of Algiers, and a hundred others.

In 1901 or 1902 I was appointed one of a committee of three to represent the National Geographic Society at the great Geographical Congress held in Paris. Besides myself, Professor Heilprin was a member and there was a third representative who was never seen or heard of, so far I know, in the duration of the Congress.

All day long, and far into the night, at various halls and assembly rooms, lectures were given and papers read on all manner of subjects more or less remotely allied to geography. For instance, there would be arguments as to the maximum temperature at the center of the earth, water pressure at the greatest depth of the sea, and other subjects so uplifting in nature that perhaps only two or three, possibly four, savants in all the world knew what they were talking about, nor would they dare to express an opinion, except to claim that all the others were completely and undeniably wrong.

As an offset to this, life after five was one mad whirl of gayety

CIRQUE OF GAVARNI

(From *Souvenir des Pyrénées*, by Eug. Ciceri)

MT. BABOQUIVARI

From a distance of 10 miles, highest point partly hidden by spur ridge

Photo, W. D. Wilcox

From a drawing by Mr. [illegible]

Plate IV. [illegible]

MT. BABOQUIVARI

From a distance of 10 miles, highest point partly hidden by spur ridge

Photo. W. D. Wilcox
Dept. of the Interior

From a distance of 10 miles, highest point partly hidden by spur ridge

Photo, W. D. Wilcox
Dept. of the Interior

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and entertainment at the homes of Dukes, Princes, and renowned savants. Hospitality reigned everywhere, and throughout the late afternoon and evening untold quantities of champagne and rarest wines were consumed amidst the compliments of the hosts and the gratitude of their guests.

But, all the time, there lurked a pleasant dream of my youth—the Pyrenees! Here I was in the very country bounded by the Pyrenees in the most intriguing season of the year when all nature was decked out in the blues and reds of the sky and the quaint farm houses, amidst the more subtle colors of the vineyards and Lombardy poplars. Moreover at this time the Lumière Company had recently completed and perfected their wonderful color process by which nature could be correctly and beautifully portrayed in the camera.

Without delay I repaired to the Lumière Company and met Professor Foubert, the director, and learned the more important requirements of their process at first hand. Having purchased several dozen 6½ x 8½" plates, I was on my way by train and speeding southwards by the first of October, stopping off a day to photograph the Pont du Gard, that magnificent viaduct and aqueduct, nearly as perfect now as when built by Julius Caesar 2000 years ago. Then there was Avignon and the quaint little city of Carcassonne, on whose vine-covered and crenellated outer walls, one can almost make the entire circuit of the city. The last part of the trip was made by bus in order to study the country in a more leisurely manner and get better acquainted with the peasant life.

At Pau there was a magnificent and luxurious hotel, from the verandahs of which one could view the long and serrated line of the Pyrenees to the S., shrouded, unfortunately, for the first week in clouds and showers. With the coming of sunshine I was off to the mountains and engaged a guide to take me to the higher passes, waterfalls and other scenic points. Of lakes there is remarkable scarcity in the Pyrenees due to the narrow, deep valleys and steep slopes. Conversely, waterfalls of beauty and grandeur are to be found almost everywhere.

The guide situation was a flat failure. They were always too impatient to get off to their families and their suppers. Nor could they understand why anyone should want to wait two or three hours to have the sun come out in order to take a picture. So after the first day I braved the wilderness alone in spite of wolves and

bandits. Long previous experience in the wildest mountain regions gave confidence and peace of mind.

Besides the wilder uplands there were fascinating little villages here and there, among them the tiny hamlet of Gedre and perhaps more interesting, Lourdes, where the limping and footsore pilgrims were cured overnight by a single glance at the Cross and figure of the Saviour, and so left their canes and crutches as a token of their faith.

I found the peasants cordial and willing to help, by posing in doorways or by their wheat shocks, in the fields and appreciative of the smallest *pourboire*. Nor could I forget the fortunate time of year at which I had arrived when the supreme beauty of autumn, the golden wheat fields, the fruit-trees glowing with rosy apples and the intensely blue sky reflected from the slate-tiled roofs, gave me a bewildering supply of subjects on every side.

The climax of the trip was, of course, the Cirque of Gavarnie, one of the highest and most spectacular in the world. The falls of Gavarnie the highest in Europe (1385 ft.) drops in one leap from valley crest to bottom and is only equalled by a few falls in the Yosemite and one in New Zealand. In the way of motion there are two sublime marvels in all the world, one, of course, the wild sea, in storm, breaking on a rock-bound coast; the other a waterfall of great height, where one may watch the unending sequence of leaps and pauses down to the valley bottom; where the wild cataract blows chill and moist drafts over the heated traveller.

I arrived in Paris near noon of a Saturday and at once called on Prof. Foubert at the Lumière Co. and tried to make an engagement for him to develop all my autochromes that afternoon, as I was booked for a steamer on Monday. To my great disappointment he had an engagement for lunch with the Comte de Chablis, or some such name, but he would develop two or three plates before leaving. The Professor never arrived at the Count's party. After the first two or three plates came out of the fixing bath he said: "No. I have change ze mind. I do not go to see ze Conte de Chablis. You come vit me to Café Voissin, poulet supreme, champagne, ooh, la la! Zen we come back and develop all ze pictchair. Mon Dieu, zees air ze triomph of ze Lumière Compagnie!"

Many of these old Lumières I still possess and delight to gaze at from time to time. In my opinion they are not surpassed by any of the modern color processes, but the great disadvantage is that, be-

ing on glass, some one always knocks the best plate onto the floor and so, year by year, they are broken and lost forever. Some readers may recall an exhibition of these pictures at the Alpine Club meeting in New York in 1922, when some 30 or 40 autochromes were shown, including the Pyrenean views.

6. Mt. Baboquivari

In the spring of 1936 I received an appointment to the Division of Motion Pictures in the Department of the Interior. The title is somewhat misleading in view of the fact that much important work in almost all other lines of photography is done in that Division.

In the beginning of summer I received orders to proceed to the West and visit the more important Indian Reservations of the northern tier of States bordering on Canada from the Chippewayans of Wisconsin and Minnesota to the Crows, Blackeet, Nez Percés and other tribes of the Pacific Coast. The purpose was the acquisition of photographs to be used by lecturers, authors and the Government itself, in the propagation of information on this very interesting subject.

For the better accomplishment of these purposes I was supplied with an excellent enclosed truck, large enough to carry a complete outfit of cameras, lenses, films, extra tires, and identification cards by which gas and all other requirements could be obtained in any state in the Union, by the mere signing of a receipt. The trip was intensely interesting though, at times, requiring very long drives, up to 400 miles in a day, and the enduring of occasional discomfort in our primitive western hotels when accommodations at the Indian Reservations were not available.

After having covered the entire northern tier of states I followed the declining sun of approaching winter southwards, through California, Nevada and Utah to the reservation of the Papago Indians in southern Arizona. The headquarters of the reservation is at Sels some 40 miles W. of Tucson, the great rodeo center and home of the broncho buster.

The Papago Indians as a race are rather low grade compared with our splendid northern tribes such as the Crows and Blackfeet. However these Indians have all the advantages enjoyed by other tribes, in excellent hospitals, lecture halls, playgrounds, and opportunity to grow up as educated and healthy American citizens.

The outstanding feature in all the landscape of that region and one that attracted my attention from the first moment, was a magnificent peak that rose to a height of more than 5000 ft. above the surrounding plain and that could be seen for 150 miles, in every direction. The upper 2000 ft. were almost vertical precipices, giving an outline to the peak resembling in a way that of the Matterhorn. Slowly but surely, and day by day, came the urge to climb the noble and inspiring mountain.

I was entirely out of condition after riding long hours by day and developing pictures far into the night, often with little rest. So I made up my mind to go into training, especially as not only one, but two, of my doctors advised me to be careful of my heart at my age. My method was as follows: Two or three times a week I would climb one or more of the little hills which are to be found almost everywhere on the reservation. They ran from 50 or 75 ft. high, to 200 or 250 ft. To the mountaineer this sounds like rather unimportant ground in which to train an athlete. However, when he understands the ever present obstacles to be overcome in the dry and friable soil, filled with cobblestones and entirely covered with dense growths of spiny cactus trees, vines and intertwining branches, he will change his mind. Every possible size and sharpness of thorn and spine serves to protect them from grazing cattle and other enemies in the race for self-perpetuation. Other species have tiny tufts of hairlike spines which penetrate the skin and remain there for days, and meanwhile, among all the vast variety, there are some species so rare and so beautiful that the botanists willingly pay several thousand dollars for a single specimen.

After a month or six weeks of this more or less monotonous work I changed my ground to the very base of Baboquivari. The mountain was 20 miles from Sels but a level dirt road led almost to the base of the peak, or rather its lower spurs. So every Sunday I spent the day on the highly interesting small peaks and ridges to the N. E. of Baboquivari. There I found endless views and fantastic compositions of scenery, giant cacti of many varieties, and the dark, vertical cliffs of Baboquivari's foot, that like sprawling claws reached out over the landscape as if they were guardians of its safety and welfare. No landscape has ever intrigued me more. The Yosemite, the Grand Canyon, the marvellous colors of the Yellowstone Canyon can rarely or ever be looked upon in solitude. One is forever surrounded by the babble of inappreciative, and often commonplace, people that distract the attention, disturb one's

NEAR THE BASE OF MT. BABOQUIVARI, ARIZONA

Photo, W. D. Wilcox
Dept. of the Interior

LOWER SPURS OF MT. BABOQUIVARI

Photo, W. D. Wilcox
Dept. of the Interior

dreams and drive one to near madness. But here I was the sole and only owner of all this majesty of nature.

Came the final day for my prospective climb. Like most all others it was cool with a faint, bluish haze that only slightly dulled the most distant horizon. The 30-mile ride seemed all too short. Hiding my car in a secluded part of a small grove near the base of the mountain, I slung my rucksack over my shoulders and was on my way. Fortunately a well-made foot path led directly from the location of my car, ever rising in gentle grade around the S. E. foot of Baboquivari. I carried out a carefully made plan for the trip. Twenty minutes of slow walking, a rest of ten minutes, then 25 minutes of a slightly greater speed and 20 minutes rest and so on for the first two hours, never exceeding 180 heart beats to the minute, or three a second. This may sound very high, but let the reader climb a staircase of three or four floors and count his pulse. He will be surprised.

The air was crisp and inspiring. There was absolutely no danger of wild beasts or human enemies. Bears are not known in this region. Mountain lions were scarce and rarely attack the traveller. If the reader will credit the statement, the only possible cause of worry might be from the droves of peccaries, the wild pigs of Mexico which roam in herds of several hundred and by sheer numbers can overcome a man or even larger enemies. One might, of course, seek temporary refuge in a tree, but the situation could become monotonous after the second or third day.

Twenty minutes steady walk and five minutes rest, twenty minutes more and a similar rest even though not in the slightest fatigued. This was not merely a pleasure trip—it was to be a conquest or a failure. Through the blue haze I could now see more than 100 miles in every direction except that part to my left cut off by the mountain side.

After three hours the trail ended abruptly against the vertical cliff of Baboquivari's highest peak. I estimated that there were as yet 3000 ft. more climbing to be done to reach the summit and this would be the really interesting part. Massive blocks of stone, some of them thirty or forty feet in length and ten or twelve feet thick lay piled in confusion at the base of a vertical cliff that rose 1500 ft. above me. Fortunately the actual slope of the mountain was here not very steep, so that the only difficulty was in climbing and traversing the enormous blocks of stone that had fallen from the overhanging cliffs in past ages. This place would have been a paradise

for rattlesnakes in summer, but fortunately they were now enjoying their long winter's nap. At length the slope turned to the right and brought me out on the N. side of the mountain which was steep enough to carry a scanty and thin growth of upland forest trees.

To all appearances the mountain was mine. After my long preparation my hopes and my aspirations it looked as if a reward was near if not actually in hand. Unwarranted desires and hope! Little did I know what serious obstacles lay before me! Where everything pointed to immediate triumph one of those unexpected and unimagined incidents came near to turning success into miserable failure!

The summit was now no more than 200-300 ft. above me. I almost imagined I could dimly see it through the thin and scanty forest now buried in snow when I came suddenly to a steep cliff, far too steep apparently to climb, *covered with ice!*

After all these days and weeks spent in preparation it seemed far too severe a blow of fate to meet with failure at the very goal of success. With an ice-axe I could have cut out a safe passage over this dangerous cliff in short order, but the only weapon I had was a pocket knife, of little more value than with which to sharpen a lead pencil. It had a three-inch blade to be sure and I went to work. At first all was well but when I got 15-20 ft. above the base of the cliff, with all those nubby and rounded lumps of ice made by smoothly flowing water, and as many more above me the prospect of a night in the woods with a broken ankle did not seem assuring. However, never looking down but always upward, I finally reached the soft deep snow and low bushes near the summit. After that it was only a quarter hour before I stood on the summit, entered the little hut and signed my name just below that of one of the Roosevelt family, a visitor of some three years before!

One could hardly imagine, without seeing it, the vast panorama that lay before me with all of southern Arizona and parts of Mexico within the limits of vision.

When I reached the trail, some 3000 ft. below the summit, two Government officials met me and asked how long it would take to climb the mountain. I told them that if they started at once they might well reach it by morning.

When I got back to Washington at the end of my trip I consulted one of the doctors who had previously examined my heart and he said it was in fine shape. The other doctor was dead.

Cascade Climbs, 1945

FRED BECKEY

North Peak of Mount Index

ONE of the more interesting phases of climbing in Washington's Cascades is the successive realization of goals, previously unattained. With the advent of the climbing season, prolonged somewhat because of the late spring snows, I undertook to visit some of the more accessible of these desired summits.

The first trip to materialize was to the spectacular North Peak of Mt. Index, which thrusts its bold precicipes so imposingly above the Stevens Pass Highway. Several pre-war attempts having been foiled by lack of time and storms, I had an insatiable desire to cross the peak from my list.

Early on July 1st, my brother Helmy and I reached its northern base via the rather depleted Lake Serene trail and a big rockslide. Here we roped and climbed up the lower rounded N. E. face, negotiating slabby rocks to the base of a great vertical cliff. Swinging to the left we climbed across a difficult rib into a gully which overhung menacingly beneath. Here we looked across the great E. face, where Tom Campbell and I ran out of piton cracks about mid-face, in 1941, after a most exposed and difficult climb.

Some hidden connecting ledges to our right and a smooth overhanging block formed the crux of a tricky route. This was a dangerous lead for there were no handholds and I had to resort to several cedar twigs that leaned down from a bush above. On some of the more exposed pitches the only safeguard was snapping the rope into a carabiner attached to a Prusik-knot sling on twigs.

From a shallow basin in mid-face, over steep rocks, we reached the arête, which gave us the most enjoyable part of the climb, because of its difficult but safe rock work for four rope-lengths.

Difficulties decreased as we wandered over the heather and broken rock slopes, ascending a sharp arête, over several false summits to the top. This 2400-ft. rock climb had taken eight hours, somewhat of an improvement on that of the previous party, which spent the night atop.

The first ascent was made some 15 years ago, by Lionel Chute and two others, a fact few believed until recently. This is the longest roped climb of any peak in Washington, via its easiest

route and is considered more difficult than Canada's Bugaboo Spire.

Mount Adams via Adams Glacier

Mt. Adams' largest glacier pitches steeply from the summit ice-cap between two rock walls on the N. W. face. Visible from Paradise Valley on Mt. Rainier, this unclimbed face had long tempted me. On July 8th at 12.15 A.M. Dave Lind, Bob Mulhall and I started on the Killen Creek Trail, 8000 ft. below the summit and seven miles distant.

Under a starry sky, we followed easy heather and moraine fields beyond the trail's end to the lower Adams Glacier. Full daylight and a brisk, chilly north wind greeted us when we reached 8500 ft., where the great icefall begins. The crevasses and séracs looked somewhat menacing, but due to the late snow conditions most of the chasms were still bridged.

Here we donned our crampons, and roped up, soon climbing a steep avalanche track to the first bergschrund. A leaning ice fragment made the crossing easier, and with but a few chopped ice-steps I gained the ensuing ice slope.

Keeping near the left side of the icefall, to avoid some enormous crevasses and séracs in the center, we wove our way tortuously upward. Our crampons bit firmly into the ice as we ascended two 50° slopes. At 10,000 ft. Dave took the lead, following our pattern of ascent by way of the left side of the icefall. After scaling several more steep ice slopes, the angle suddenly decreased from an average of over 40° to about 30°. The hollow-faced glacier here offered a greater variety of routes, but we kept a course leading directly to the summit ice cap just as the sun struck us for the first time. Swerving to the right, we completed a first ascent by a new route at 9.15 A.M.

We basked in the sun on the leeward side of the summit cabin for an hour. We left reluctantly, as insurance against glacier lassitude on the lower slopes, descending the easy N. ridge.

To those interested in early summer ice climbs, Mt. Adams via the Adams Glacier is recommended.

Warrior Peak (Olympics)

One week later I took a jaunt across Puget Sound into the Olympic Mountains, to visit the unclimbed second highest peak

in the eastern front range. Its 7300-ft. double summit lies just north of Mt. Constance. Via Marmot Pass and the upper Dungeness Trail, the trip proved to be a marathon, the round trip distance in one day being 27 miles with 8000 ft. of altitude gained. More than once I fervently wished that I had had some sleep the previous night.

The actual climb was from the W. up a conglomerate 300-ft. rock pyramid. One 20-ft. vertical spot proved somewhat thrilling. As expected, there was no record on this or the slightly lower W. summit, so I took the liberty of building a cairn and gave the peak the name, "Warrior Peak."

Mount Hagan

From the top of Mt. Blum in the wild region E. of Mt. Baker, Keith Rankin and I were beckoned by the pointed virgin rock peaks of 7050-ft. Mt. Hagan. Relief is great considering the Baker River at its western base is only 600 ft. Access to the shining glacier and sharp rock summits was a problem because of brushy mountain sides and low-altitude cliffs.

July 16th, in the late afternoon, found us with Martin Ochsner, Herb Staley, and Melvin Marcus at the end of the four-mile Noisy Creek Trail. From 2200 ft. we climbed a heavily forested mountain side, steering clear of the brush, to a quaint hanging valley N. W. of Bacon Peak. There we camped for the night.

At the day break we left for the alpine ridge above, here seeing our objective some two miles N., being separated from us by two passes and a high ridge hump. From a ridge lake at the second pass, we ascended to the 6700-ft. ridge above the glacier edge. The latter we followed in an arc to the northern base of the south peak, which appeared highest.

Dividing the party into two ropes, we moved easily up the lower rocks in tennis shoes to a small notch. The final 150-ft. of the jagged summit tower had its obstacles to offer, the worst being a strenuous layback and some high-angle slab work.

After leaving our regards to future vagabonds in our cairn, we descended to the glacier, and climbed the two easy middle summits. Attention then focused on the hostile 60-ft. pinnacle of the slightly lower N. peak.

We reached it by the glacier and some ridge scrambling, and

as before divided the party, Ochsner and Rankin climbing the E. face: Marcus, Staley and I up the S. face. Both routes approached the vertical throughout; but good handholds insured success as we gradually worked our way up the last new climb for that day.

East Wilmon Spire (Monte Cristo Region)

In the days when Monte Cristo was a booming mining town, the Wilmon brothers had offered a $500 reward to anyone who would ascend either of the Spires. Herb Staley and I came just a half century too late!

On July 19th we climbed up a long gully, past old mines and rusted mining equipment, to a col between the spires, from where we saw the unascended East Spire, some 300 ft. high on the W. and S., and 200 ft. on the E., with a huge drop on the N. to Glacier Basin. The rock dipped sharply to the W., which would have made the E. face preferable for the climb, had it not been leaning outwards and much eroded. Our hopes rose when we spied a rotten but easy ledge across the S. face to the western edge, about 150 ft. from the summit. Changing to tennis shoes, we made the first pitch easily, but the second required more care due to the exposure. I placed several safety pitons in very solid granite schist, reaching a point high on the bold W. face.

After belaying Herb, I worked across the S. face on a delicate sporting traverse, requiring a safety piton to a belay spot on the upper edge of the E. face's overhang. The final 50 ft. required the utmost caution, but were not as tricky as was anticipated.

After a short stay on the meager summit, we made a slow descent because of the exposure and scanty belay stances.

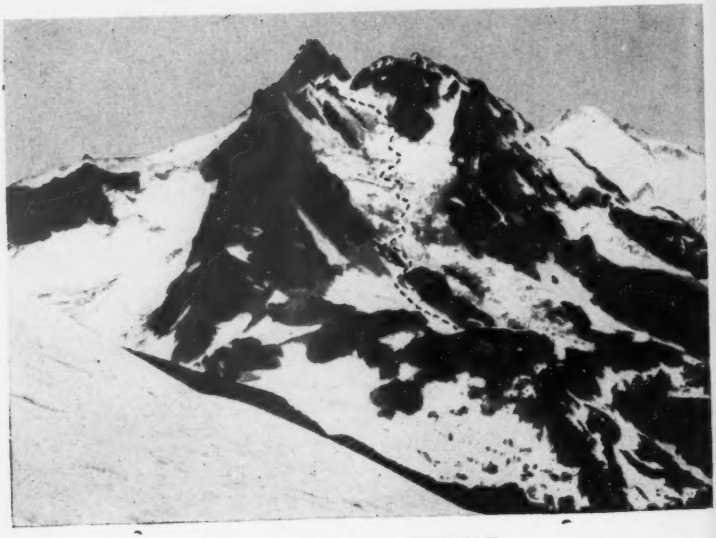
Mount Shuksan via N.E. Face

The summer was drawing to a close. The N. face of Mt. Shuksan (9038 ft.) had never been disturbed by human feet, being the last unclimbed face. On the week-end of September 9th, Jach Schwabland, Bill Granston and I left the North Fork Nooksack spur road (2000 ft.) at 1.30 A.M. With flashlights we followed the trail, river bed, and a long rocky gully to the alpine ridge at 5000 ft. The huge steep face rose dimly in the early morning light, showing fresh snow everywhere on the upper stones. Heavy

EAST WILMON SPIRE
Showing climbing party on first ascent

Photo, R. Snively

N. W. FACE OF MT. ADAMS



N. E. FACE OF MT. SHUKSAN

Photos. D. Watson

rain had dampened our enthusiasm on a previous trip, but now a clear sky gave up an incentive to push forward.

After climbing a lower section of the glacier, we took off our crampons, crossing a rocky rib on our right to the main glacier. A traverse brought us to serious ice-climbing as we slowly wormed our way upward through crevasse fields and exposed ice slopes. Luckily we had been in the shadow, or the new snow, only half frozen to the glare ice beneath, would have been an avalanche danger.

The final steep pitch, before reaching temporarily easier slopes, was a great ice dome that required steps in addition to the usual ankle strain. We came to the great bergschrund series below the final ice chute shortly after 10.00 A.M. A steep 55° ice slope on the left was the quickest route to the Curtis Glacier near the summit, but the avalanche danger decided us to "sneak" along the right side of the bergschrund series between the ice and rock.

We slowly worked our way up some seven rope lengths of diagonal ascent on very steep snow covered rock, having little choice of route, for the wall overhung above and the huge chasm beneath made a cleavage between rock and ice. I had to brush frozen new snow from the rock, to search for handholds and placed pitons several times as a safeguard, as the belay stances were generally poor.

Above the schrunds we climbed to the top of the chute on treacherous steep ice, descending then into a wind eroded cavity before gaining the edge of the Curtis Glacier. The latter was quickly traversed to the summit pyramid, the top of which was reached at 5.00 P.M.

We left immediately on the regular route, thus also making a first E.-W. traverse. Darkness had enveloped us as we reached the Austin Pass Trail. Before the next Sunday, Mt. Shuksan had thrown about his shoulders a white mantle of new snow.

The Wonderful Story of Abe Lincoln

CLAUDE EWING RUSK[1]

"THE Cascadians are fools," said Abe Lincoln. "I know they are fools—I've been there, I know!" And this because the Cascadians were planning a trip to the E. side of Mt. Adams to ramble over the big glaciers and to climb the mountain. Therefore, Abe unburdened his mind to Grandma Hause, pioneer of Southern Washington, perhaps in the hope that she would convey to these rash city dwellers some idea of the terrible dangers they were needlessly seeking.

For, when Abe was a young man, without any desire to become an alpinist, he met with an adventure that is probably unique in the history of American mountaineering. And because it was so remarkable, I have departed from my rule and have here set down an experience with which I had no personal connection.

In August of what was probably the year 1869, Abe Lincoln and Charley Olney, two young Yakima Reservation Indians, set out one morning, riding two race horses, with the intention of visiting the camps of their people at the great huckleberry patches N.W. of Mt. Adams. They left the Hadley place on the upper part of the reservation. They must have ridden rapidly for they reached the Klickitat River at noon. Here they rested for an hour, then went on. About the middle of the afternoon they got to a point N.E. of the mountain near what is undoubtedly the present Lyman Glacier. At this place the trail forked.

One who has been over this route can but marvel at the quick time these young Indians made. Their horses must have been wonderful travellers, or they must have been mistaken in the time.

Here what are described as "five, long, slit-like chasms" yawned in the glacier. No doubt the Lyman Glacier, like most glaciers of its kind, has diminished very much in size in the past 56 years; at least there have been many changes in its contour, and it would be impossible to now locate the spot where these great crevasses existed.

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[1] The author (1871-1931) was an original member of the American Alpine Club and one of the best-known mountaineers of the Pacific Coast, his biography appearing elsewhere in this issue. This story forms a chapter of an unpublished book. The Indian hero was still alive in 1921.—Ed.

Upon reaching the forks of the trail, Olney, who had never been in the mountains before, asked Lincoln which way he was going. Lincoln, a dare-devil sort of a fellow and one of the most reckless riders among the Yakimas, pointed to the chasms and said: "We cross right there!"

Olney immediately objected. He said it looked bad to him. Lincoln only laughed and told him to stay there if he did not want to go. Lincoln rode on, and Olney remained sitting on his horse at the forks of the trail. But when Lincoln presently called to him and assured him that he knew the trail while his friend did not, Olney finally joined him and they went on.

They reached the first of the crevasses about 3 o'clock. It was arched by a bridge of ice and they rode across without difficulty. The next one was also bridged a few yards farther up; but there was a raise of some three feet to get up onto the bridge, and Lincoln's horse refused to make the ascent. Abe rode back past Olney to the lower end of the crevasse. Olney, seeing that the ice was thin at that place, called to him to wait and let him lead across the bridge which he saw was thick and firm.

Lincoln made no answer. He rode out, over the abyss, upon the snow-covered ice. The horse took two steps. Suddenly the treacherous covering gave way—animal and rider crashed into the depths of the icy chasm. A hole five feet in diameter marked the place where they had disappeared.

Horse and man plunged downward into the frozen void, until at a point far below the surface, the narrowing walls came close together like pitiless jaws and held the body of the unfortunate animal as in a vise. The poor beast died immediately; but the Indian landed near the saddle upon its neck—uninjured.

Olney was horror-stricken. He felt that his friend must be dead, his body likely lost beyond recovery, while he was left alone in a wild mountain region with which he was unfamiliar. Dismounting from his horse, he cautiously approached the jagged hole in the snow, afraid of what he should find when he got there. Soon, however, he heard Lincoln's voice in answer to his own, and his relief was unspeakable. By carefully peering over the edge he could dimly make out the form of the other Indian and the dead horse in the depths far below. Back and forth the two discussed what was best to be done.

Before attempting to draw his companion from his precarious position, Olney asked Lincoln to let him try an experiment. With great difficulty Lincoln removed the saddle from the dead animal. Olney let down his rope and Abe tied his own rope to it. Olney then tried to draw the saddle up; but the rope cut into the ice and snow so that he could not get it to the surface.

This experiment showed the two Indians that it would be impossible for the one man unaided to draw the other from the icy depths. It was quickly agreed that Olney must set forth alone, unexperienced though he was, through a strange wilderness, to seek the camps of their people, far to the N.W. Lincoln instructed him to go back to the main trail and take the route leading farther to the N., and thus avoid the dangers of the shorter cut they had attempted. So Olney rode away, and Lincoln was left alone in the depths of his icy cavern, crouched upon the body of his dead horse, to face one of the strangest and most heart-breaking nights that ever fell to the lot of a human being.

The walls of the crevasse were dripping wet with the water that was melting from the ice. According to the best possible estimates Lincoln was down between 30 and 50 ft. He had no means of knowing how far he was from the bottom; but he could hear the water gurgling far below him. To save himself from perishing during the long hours of cold that were sure to follow he had only his double blanket which he had succeeded in retaining. He was in a cramped and torturing position; but there he must remain until help came, if ever it should come, for there was no possibility of his reaching any other spot. Added to his physical suffering was the dread uncertainty. Would his friend, inexperienced and alone on a wild mountain, be able to find his way to the camps of his people? Would he himself be strong enough to withstand the numbing cold until the dawn of another day and the coming of a rescue party? And Olney, too, might meet with accident and never deliver his call for help.

The long hours of the afternoon wore slowly away. The great shadow of the mountain was creeping eastward across the wooded hills toward the distant home of the Yakimas. But in the mind of one young Yakima was rising a doubt if he should ever see that home again. The chill increased as the day advanced. The ordeal of sitting cramped up and scarcely able to move throughout a long mountain night would have been terrible enough for a man sitting

on firm, dry rocks; but the imagination fails when one tries to visualize a man held between unyielding walls of ice, under a roof of crystalized snow, with ice-water constantly dripping upon him. Probably a more highly-strung mind would have snapped under the ordeal. But Lincoln was undoubtedly possessed, more or less, of the usual stoicism of his race. Then, too, he was young and inured to hardship; a hunter and rough-rider who had faced many a winter storm. Yet we can but marvel that he could even hope to see another day.

Darkness settled over the great mountain and still Lincoln was alone in his frigid cell. No help had come. Only the gurgling of the water far below; the occasional crunch of a rock settling more firmly in its icy bed; the rattle of stones clattering into a glacier-cleft; the subdued roar of a distant avalanche, gave sound to tell that nature was still grinding away at her age-long business of erosion. Came no halloo of rescuing friends; no cheery shout to say that help was near. The voices of the night were all of nature's making—man had no concern with the noises that were abroad.

Lincoln had to maintain his perch on the body of the horse. Should he once lose his position he would slip farther and farther down into the grip of those frigid jaws, wedging tighter and tighter through the pull of his own weight, the icy grasp of Death closing around him still more grimly, until the chill had sent the last spark of life from his frozen body and no earthly power could dislodge him from his glacial tomb.

Through the hole far above he could see that it was night. Possibly he caught the glint of a few stars, glittering with the deep intensity that marks the gleam of stars at such great altitudes. The rift in the snow was his only dial—to mark the hours of doom or the hours of hope!

How much of consciousness he maintained throughout the night we can but guess. Perhaps the time passed, for the most part, as a hideous nightmare. No doubt the blackness of despair was added to the darkness of his prison. Perchance he now and then dropped into a doze and dreamed of pleasant hunting grounds and gleaming camp-fires—only to wake again to the horror of his situation. Delirium may have held him for a spell. And yet we know throughout it all he kept enough of reason to hold his place upon the body of the horse.

One who has spent a sleepless night knows how interminable

are the hours. Even in the comfort of a warm bed, how the moments drag! And when the time is marked by suffering or discomfort, how that awful tedium is accentuated and drawn to the limit of endurance. Then what must it have been to this young Indian, freezing and alone, possibly assailed by superstitious fears, feeling, no doubt, that this was his last night on earth, facing an eternity that has appalled the wisest of mankind?

Seconds dragged into minutes and minutes into hours. The advance of the night was marked by the increase of cold. The poor Indian's cramped limbs became an intolerable torture. It seemed that the limit of human endurance had been reached; but the end was not yet. How far, how unsufferably far, we any of us may go after it seems that the end has been reached! Ages of agony were crowded into that one August night. But the world still turned on its axis and another day must come.

At last the light in the hole above grew stronger, so faintly stronger, and he knew that a laggard dawn was creeping on. With incredible slowness the pale glow increased, minute by minute, until at last, Abe Lincoln knew that the slumbering earth was waking to new life. Soon the great warm sun would come thundering up across the sage-brush plains of the Yakimas; but would it bring relief to him? Would his fellow Yakimas come with the coming of the sun?

The full day broke. But with it came no help for Lincoln. With numbed and blunted senses, hope dead in his heart, he now awaited the end. Morning wore toward noon; the glacial sounds revived; the tremendous drama of the mountain swept onward in its age-long course; but there was no note to herald the entrance of human actors. Ten o'clock, and still he was alone; growing weaker with each dragging minute. Another half hour passed, and then an hour. With the despair of coming death upon his heart, scarcely conscious now, his body huddled for its last sleep, the spirit of Abe Lincoln prepared to mount its steed and ride away to the happy hunting-grounds.

Meantime Charley Olney, stranger in a strange wilderness, after indescribable hardships, had succeeded in finding the camps of their people. The last one he came to was the camp in which his wife and his father-in-law were located. Just before he reached this, his horse had given out and had to be left. At 9 o'clock in the morning, Olney and his father-in-law, Yesmowit, set out with

ten followers on their mission of rescue. Yesmowit was mounted and Olney rode his wife's horse; the others were on foot. On the way another horseman joined them, thereby increasing the party to thirteen. In one of the camps they found an old blind medicine man named Spe-hah-kin who had two horses. He gave them the animals and told them to ride double turn about, until the horses were killed. They now had five horses for the thirteen men.

And now began a race against time for the life of Abe Lincoln. They rode double—two on each horse—the extra men running ahead on foot, some stripped to their shirts and moccasins with loin cloths about them. When a tired men was overtaken a rider changed with him, and thus they travelled, up the long slopes and over the jagged lava, until the two horses of the medicine man were exhausted and left on the trail.

The high lava trails on the N.E. slope of Mt. Adams are heart-breaking ones, under the most favorable conditions. The agonizing hardships endured by that determined band of hardy Indians, as they raced up the mountain-side to the rescue of their friend, may be imagined by those who have travelled similar trails—but never described.

It was full noon when at last they reached the scene of accident —exhausted and dreading what they might find. They cautiously approached the chasm roped together in couples. To their joy they found Lincoln still alive, but with legs cramped and stiffened almost beyond the power of motion—the whole man on the point of utter collapse. They succeeded in rousing him sufficiently to do what he could to aid in his own rescue.

They had rawhide lariats, each of which was from 25 to 30 ft. in length. It took a length and a half to reach the imprisoned man. Two lines of rope were let down, one from either side of the cleft. The edges of the ice were padded with folded blankets. Lincoln had strength enough left to place the prepared loops around his body. He was then drawn up with the two lines. As he approached the top, one rope slackened so as to permit him to swing to the other side. One of the Indians caught him by the hair and he was dragged out into the full light of day.

If the Indians' estimate of time was approximately correct, he had been in that icy hell for 22 hours, enduring what few men are given strength to endure.

After a two hours' rest he rode to camp behind Olney!

Across the Col d'Hérens in 1892

CHARLES FRANCIS JUDSON

LOOKING back to memorable days spent in the Swiss Alps I can recall few more delightful in retrospect than those spent in a trip to Arolla and Zermatt. It was the summer of 1892 when I left Vevey by train for Sion in the valley of the Rhône. The post wagon took me up the Val d'Hérens as far as Evolena, through a deeply cut picturesque gorge. A priest on the way to his charge proved delightful company. From Evolena I climbed by a good path to the Mayens d'Arolla situated at a height of 6570 ft. A favorite resort for the English climbing fraternity, it takes its name from the Alpine cedars (arolla) which cover the mountain side.

The next day proved fair. I was asked to join two Englishmen in a trip over the Pas de Chèvres, which descends via a steep bit of rock (*mauvais pas*) to the Glacier de Durand at the foot of Mt. Blanc de Seilon. We returned to Arolla via the Col de Riedmatten. After a satisfying day's outing I was looking forward to the table-d'hôte dinner when the telegram arrived from my brother at Evolena. We had planned to join forces for a visit to Zermatt via the Col d'Hérens. He was waiting for me, and had engaged the services of a guide for the crossing of the col on the next day. An interchange of telegrams followed. But the guide refused to postpone the excursion, averring an engagement with another *Herr.* for climbs in Zermatt. Most reluctantly I was forced to leave Arolla about 8 o'clock that evening. With the aid of a grown Swiss lad whose knowledge of by ways shortened the distance considerably, I made a quick trip to the Ferpècle Alp, which was reached about 11 o'clock. There was time for only two hours rest in nothing more inviting than the guides quarters. Towards 1 o'clock after the usual breakfast of black coffee and a slice of bread, we started by lantern light for our long ascent. Via the Alp Bricolla we arrived at the upper part of the Ferpècle Glacier, the Wandfluh on our left. As we mounted the long arête of the Dent Blanche came into view.

Those travellers who know only the eastern face of the Dent Blanche as seen from the Hörnli—with its long ridges of rock

DENT BLANCHE
Western aspect

DENT BLANCHE
From the Matterhorn Hut

Photos, V. Sella

partly snow-covered and glistening as the sun strikes them—can have no idea what a contrast the western face presents.

The precipitous rocks quite bare of snow and ice rise abruptly from the névé and fall on the northern side in one gigantic descent to the Col du Grand Cornier. Many gens d'armes and one great tower break the skyline. One day in August 1890 three experienced members of the English Alpine Club were making a guideless ascent of the Dent Blanche.[1] They reached the summit, but on the way down were overtaken by a thunderstorm as they were starting the descent of the tower. Complete darkness enveloped them broken only by flashes of lightning which caused two of them to drop their ice-axes. Further descent was impossible. They spent the night on a narrow ledge of rock, but managed to rope themselves securely to the mountain side. Fortunately the night was not excessively cold and they were able to complete the descent to Zermatt the next day, meeting on the way parties sent to their rescue.

We reached the highest point on the col about 11 o'clock, a magnificent viewpoint. In the immediate foreground the Dent d'Hérens' great massif of rock was conspicuous; across the Zermatt Glacier the long arête of the Matterhorn rising from the glacier to the summit and flanked by the Italian ridge, seemed to pierce the sky.

The descent to the Stockje was tedious, the sun was hot on the glacier and a few open crevasses had to be detoured. We pushed on to the Staffel Alp and Zermatt arriving about 2 P.M., to find that no beds were available in the Seiler hotels. Finally we secured accommodation at the Schwarzsee Hotel, an ascent of 3000 ft. above Zermatt on the Hörnli ridge. *"Cà valait le peine. Nous n'avions aucune envie de coucher à la belle étoile."*

In conclusion may I emphasize some advantages that attend the crossings of passes as against the ascents of peaks—they are the greater ease of accomplishment, the lessened strain since the time factor is less important, and more leisure to enjoy the Alpine scenes.

[1] *A. J. 15,* 404.

The Exploration of the Sources of the McLennan River

RAYMOND T. ZILLMER

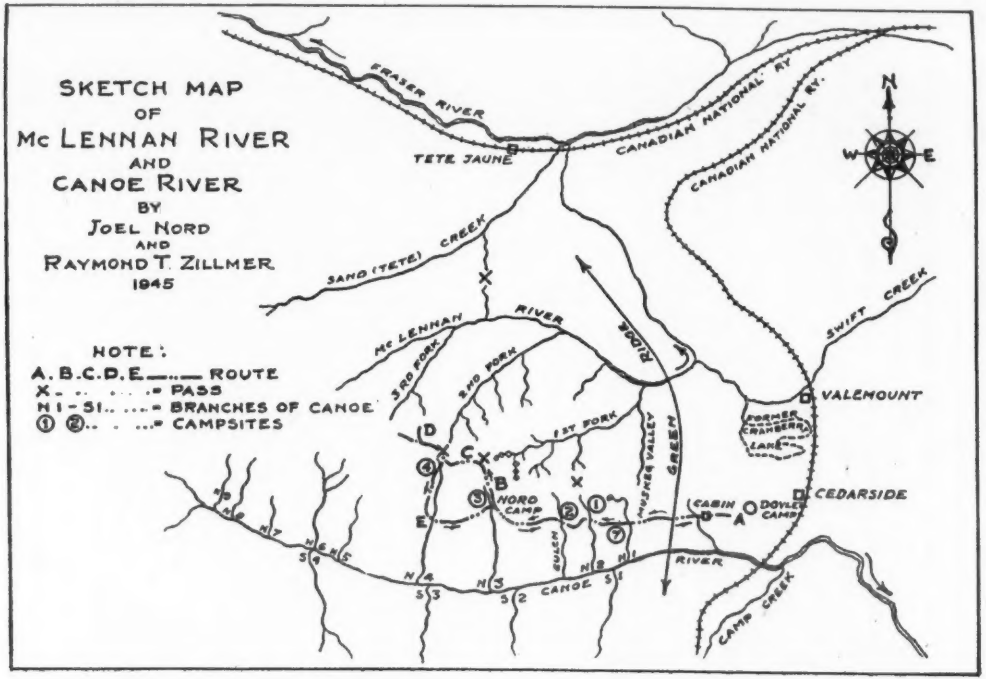
WHEN exploring the sources of the Canoe River two years ago, Lorin Tiefenthaler and I were intrigued by a spectacular group of peaks to the N. of the river. We saw them as we looked W. from Key Peak—a viewpoint which was too low to permit unraveling the arrangement. Ten days later, when we were at our glacier cave camp 10,000 ft. high, on the divide S. of the Canoe, these peaks and the glaciers about them were again one of the most conspicuous sights in the Canoe area. Although I was too far away to map the region, I determined that some of the peaks exceeded 11,000 ft. This region is designated on my sketch map of 1943 as "icefield and peaks."

I planned that my next trip of 21 days would have the following objectives: the climbing and exploration of this area, as well as that about the S4 branch of the Canoe, and a crossing from the Canoe to the North Thompson basin. I fully realized that these objectives were rather ambitious for three weeks, but one must plan for a maximum to realize even a minimum, as I found on my other exploratory trips.

That I would penetrate additional sources of the McLennan River was farthest from my thoughts, for I assumed that the Sand Creek drainage lay N. of our first objective. However, the location of Sand Creek and the location of the McLennan, which we had explored two years before, seemed to leave an unaccounted-for space of the Cariboo Mountains between them. What streams, if any, lay in this region? My trip was not directed towards solving this question, although, as will appear, it became necessarily involved in the other plans that I had made.

Lorin Tiefenthaler, who had been such a pleasant and capable companion on so many trips, could not go with me in 1944 or in 1945. My search for a suitable person to take his place ended in my employing someone to accompany me in 1945. I shall call him Jim. He was recommended by a responsible packer whose judgment I thought could be relied upon.

I intended to start into the mountains about July 1st, but Jim


SKETCH MAP
OF
Mc LENNAN RIVER
AND
CANOE RIVER
BY
JOEL NORD
AND
RAYMOND T. ZILLMER
1945
NOTE:
A.B.C.D.E.—.—.— ROUTE
X - . . . . . = PASS
N1 - S1.. . . . = BRANCHES OF CANOE
① ②.. . . . = CAMPSITES
FRASER RIVER
TETE JAUNE
CANADIAN NATIONAL RY.
CANADIAN NATIONAL RY.
N
W
E
S
SAND (TETE) CREEK
Mc LENNAN RIVER
3RD FORK
2ND FORK
1ST FORK
RIDGE
SWIFT CREEK
VALEMOUNT
FORMER CHAMBERS LAKE
CEDARSIDE
GREEN
MOUNTAIN VALLEY
NORD CAMP
CABIN
DOYLE CAMP
CANOE
RIVER
CAMP CREEK
N7
N6
N5
N4
N3
N2
N1
S1
S2
S3

wrote that the season was so late and the snow so deep that I had better start a month later, which I did. Every time I have gone into the Cariboos, the advance information has always been the same—a late season and deep snow.

With food for 21 days, our packs would weigh approximately 75 lbs. each. To avoid carrying them from the beginning, I employed a packer and two horses, one a pack horse, and the other a saddle horse, with the hope that we could use them for two days going in —the first day on the trail taken two years before, and the second, along a route that would be feasible for horses. The occasional use of the saddle horse would permit me to condition myself gradually. I expected to reach timber line the first day without trouble by a gradual rise of about 3500 ft., and while I anticipated difficulties on the second day, I hoped to be able to lead the pack horse along the timber line on the N. side of the Canoe River to the vicinity between N3 and N4. Here the largest part of the supplies would be cached and thereafter, going light, we would attack the mountains to the N. In this way, our packs would be reduced to about 60 lbs. when we returned to our cache and back packed across the Canoe to explore the region about S4.

Each year something occurs which has made our load heavier than we had planned and heavier than the year before. In 1943, deep snow stopped the pack horse and forced us to carry our packs on the second instead of on the eighth day. And this year was to be no exception.

On Sunday, July 29th, I arrived at Valemount, B. C., expecting to start the next morning, but the horses were not ready. It seemed they had been stolen or had strayed—it was not clear which, nor did I ever find out. But other horses were ready on Tuesday morning for the start from Doyle's cabin from where we had started in 1943.

Jim, my companion, was born and raised in the mountain area. He was a bachelor, about 35 years old, over six feet in height, and slender, though he weighed about 185 lbs. He had a fine physique and he seemed in every way physically well equipped for the job expected of him. However, the first thing that he said to me when I met him was that he wouldn't take any chances. I assured him that I always take every precaution for safety—that this was my tenth back-pack trip in the mountains without serious injury, and my fourth in this vicinity.

LOOKING W. FROM PASS BETWEEN HEADS OF N3 AND N4
Pass from N4 to 2nd and 3rd forks of McLennan at right

LOOKING N. E. DOWN 2ND FORK OF McLENNAN
Photos, R. T. Zillmer

LOOKING N. E. DOWN 2ND FORK OF McLENNAN
Mt. Robson in distance (about 30 miles). Mts. Longstaff and Whitehorn to left

LOOKING N. E.
Saw-toothed Ridge between Main McLennan and 3rd fork (at left) and 2nd fork (at right). Mts. Longstaff and Whitehorn in background over ridge. Mt. Robson in clouds.
Photos, R. T. Zillmer

Donald Gordon, who furnished the horses, had a very broad experience in the mountains of this area. He back packed for surveys and for mines. Jim told me, just as a packer living in the vicinity had told Allen Carpe in 1924,[1] that a low pass separated the Rausch River from the North Thompson River. But Donald knew better, for he had packed to the head of the Rausch, over the low flat pass into the Azure, and over the divide on the W. to the Blue Ice Claim at one of the sources of Hobson Creek. He also back packed supplies up Serpentine Creek to the top of Mt. Lempriere in the Monashees when the Geodetic Survey occupied that peak, and, laughing about it in a critical way, he told how the high wooden standard, which was to hold the light, had been built below the mountain and back packed all the way to the top.

The horse that was to pack our supplies had never been used as a pack horse and was not shod. When he was being packed for the first time, with everyone trying to reassure him in the various phases of the packing operation, we expected some revolutionary reactions. But the animal, to the surprise of everyone, was most intelligent. He seemed to understand what was taking place and took everything with a calm and poise that approached human comprehension, and he proved equally capable and intelligent on the entire trip. This is a considerable compliment, for he met many new experiences, I am sure. Perhaps his good behavior may be attributable to the fact that the saddle horse was a lady and the pack horse was a gentleman. He never left the side of his lady.

The first day was quite uneventful, for everything went smoothly according to plans. According to Steffanson, we had a right to feel quite competent that day, for to him mishaps are a sign of incompetency. But we would soon feel otherwise. Our trail, in a general westerly direction, took us at right angles over a well wooded ridge which, where we crossed it, was about 1000 ft. higher than the Valemount flats. This ridge deserves some consideration. It is next to the Cariboo Mountains themselves although as it runs to the N. by N. W., it gradually becomes higher until, at the N. end, it merges with the Cariboos. On the S., this ridge seems to reach to the southern side of the Canoe, and this accounts, I believe, for the fact that the Canoe flows through a canyon just before it reaches the flats. There is no break in this ridge excepting that

[1] *Appalachia*, June, 1928, p. 9; February, 1926, p. 403.

made by the Canoe and the McLennan Rivers. Jim said that this ridge was once the shore of a lake. Is this ridge the frontal moraine of a large glacier that once went down the entire Canoe and McLennan valleys? The valley of the Canoe is sufficiently U-shaped to account for such a glacier. A glacier occupying the entire Canoe Valley W. of the green ridge would have been 25 miles long. The flat upper portion of the Canoe Valley shows that only very recently, perhaps 20 years ago, it must have contained a glacier about two miles long, and this portion of the valley has very steep walls, sufficient to account for a glacier of considerable depth.

The trail, after crossing the ridge, drops into a marshy area behind it but soon mounts rapidly up the side of the Cariboos proper. In the early afternoon we reached timber line, and when, shortly thereafter, we arrived at N2, I could hardly recognize the vicinity, for it was now grown up with bushes, and on our prior trip it presented quite a different appearance. We went up steeply alongside N2 and camped early that afternoon at about 6000 ft., a few hundred feet below our former camp. There was almost no snow about, whereas two years before, the snow was very deep and impossible for horses. Donald saw a coyote near camp that night. The night was cold—31° at 9.15 P.M.

The next day gave me great concern, for we had reached the end of the trail and neither Jim nor Donald knew anything about the country we were heading into, and I had seen it only from the mountains above. How far could we take the horses? Much depended on that. In the morning we worked our way up the steep slope on the W. side of N2, and when we reached the top of the cut we made our first mistake. We worked our way down and around the side of slopes instead of going higher, so that we were soon working our way through the tangle of the fallen timber of an old fire, whereas higher up, we would have been, for the most part, in fairly smooth grassy alpland. The going on the second day was so rough that the saddle horse was useless. There were many indications of moose about us.

After travelling an hour we saw ahead of us and perhaps a mile away, a creek which cut deeply between two ridges that came from the mountain on our right. The ridges seemed steep on the sides facing us but lower down they merged with a high bench. Our problem was to go either below the ridges or to cross them perhaps one-fourth of the way up. Jim thought that we would

be unable to reach the alpland behind the ridges if we took a route below them. I saw courses up the E. side of both ridges that seemed possible for horses, but Jim was very doubtful. However, he determined to attempt a crossing of the ridges and we took a route which brought us on the easterly ridge without great difficulty. But as we looked down the other side we saw that it was impossible for horses, for the creek at this point was in a canyon. We retreated but were able to cross the ridge perhaps 500 ft. higher over steep, grassy meadows between trees. In this crossing, the pack horse, being unshod, gave much concern to the men. We lunched on reaching the creek, and after lunch we again went up a very steep, grassy meadow to the top of the second ridge. As it was about as steep as horses could go, especially unshod, we were careful never to be below either of the horses, which, had they lost their footing, would have rolled to the bottom of the gulch.

On reaching the top of the ridge, we were shocked to find a steep wall on the W. face. Jim walked up the ridge some distance to see if there was a break in this wall, but he found none. I went down the ridge and found a place where the wall was broken and where I could walk off the ridge without the use of my hands. I felt that we could get the horses down if we unloaded them, but Jim, more experienced and cautious, felt otherwise. So we returned to the creek and camped there, having advanced on the second day about as far as one could back pack in two hours.

On the morning of the third day, Donald left us. Jim and I were now confronted with the problem of back packing our entire load to the point where we had planned to cache most of it—a point we had hoped to reach with the horses. The weight of the load now was even greater than in 1943, for Jim, in spite of my instructions to the contrary, had made several weighty additions. He had insisted on taking a heavy rifle as a safeguard against grizzlies and to provide food in an emergency, although I had never regarded a weapon as necessary for either, a three-inch bladed jackknife and the ice-axe being my only weapons. He also added to our load 6 lbs. of bread, other food, several pounds of tobacco, and a heavy tarpaulin to cover the cache. He insisted on carrying an axe, which I never carried except when I expected to build a raft. This additional material increased each of our packs to about 80 lbs. In addition to the pack, Jim always carried his gun, and I, the two ice-axes tied together in a very clumsy package.

We went over over the ridge without much trouble, however, and then took a course westward a little below timber line, whereas, had we known it, we could have again taken a better route on the quite level alpine meadows above timber line. Shortly after noon we saw N3 below us and were surprised to see smoke in the valley. Jim thought the camper was Joel Nord, a prospector whom he knew, but he was not sure, so he cautioned me to be quiet as he approached the camp and held his loaded gun ready for firing.

It proved to be Joel Nord, who had been prospecting for mica in this locality for three years. We camped with him, and I obtained a great deal of information from him, for he had made a very thorough examination of the country to the N., S., and W. of us and had staked out over half a dozen mica claims that looked very promising. The information proved to be of great value and saved us considerable effort and time.

I had intended to continue W. on the Canoe River side of the mountains and to cache my supplies a few miles W. of N3. I expected, by climbing the mountains to the N. of our cache, to reach the icefield and the high mountain area, but Joel said the high peaks I was looking for were not there, as the mountain I wanted to climb was a single mountain mass which dropped immediately on the north to a pass which he recommended that we take to reach the upper portion of N4. This pass could be reached by going north to the head of the valley we were in and then by turning W. we would enter the drainage of N4.

To the W. of N4 lay the area we were looking for, and by going up N4 to its source we would reach a second, a third, and possibly a fourth fork of the McLennan, as well as an approach to the high area. On brown wrapping paper Joel drew a map of the route showing the branches of the McLennan, and a very accurate map it proved to be. He has since drawn a more accurate and complete map which appears with this article. I have made some changes in it, principally in compass directions, but substantially it is the map of Joel Nord. While I have never examined Sand Creek, I include it in the map to show the position which I believe it occupies in relation to the McLennan. Everything Joel described proved accurate, and while I probably would have discovered these creeks in any event, it would have been only at a great waste of time and energy. I am happy to acknowledge my indebtedness to Joel Nord.

His mentioning of the additional forks of the McLennan was in one sense a surprise to me, but in another sense it was not. On my prior trip I had gone to the source of "a" McLennan and I knew of no other McLennan, but I could not understand what streams, if any, were between Sand Creek and the McLennan we had examined. The area was so large that it seemed to require some streams for proper drainage. But I did not know a satisfactory answer to this puzzle until Joel spoke of the additional branches of the McLennan.

The next morning, with Joel accompanying us and packing part of our supplies, we went up to the source of N3. On the way up, we passed our camp site of 1943, stopped at Joel's forge where he sharpened his drills, and examined the books of mica in the claim that he was then wŏrking. We followed the top of the terminal moraine of the glacier flowing from the mountain west of us. The glacier showed considerable recession, and in the not too distant future a lake should be formed at the end of it, for a small pond is already formed behind the dam of an old moraine.

When we reached the top of the pass, we overlooked the McLennan which we had explored two years before, except that we were now in the northern part of the end of the valley. The end of the valley was broader than I had thought it was. Below us was a string of three greenish-blue lakes which, although surrounded by a barren area without vegetation, looked beautiful from above. Joel told me that he had been in this valley two years before, the very day after we had been there, and he pointed out to me the rather spectacular route we had taken. It appeared that we had followed a ledge on the S. side, then in deep snow, now bare, and thereafter had gone up the glacier which occupies the S. side of the valley. The glacier seemed too steep to negotiate, for now the ice was bare, whereas, we had deep snow. Joel had seen our camp on the McLennan and on N3, but he always arrived a day after we had left. The barometer showed 8050 ft., but it was probably higher. It hailed and snowed, and the temperature was near freezing at about 2.00 P.M. when we were in the pass. Jim declared that we would have had a better route to this pass if we had crossed into the McLennan after the first day and had gone to the area of the three lakes that we looked down upon, but Joel said that pack horses could not have reached the lakes.

We then turned and walked west down a small glacier and the

north side of the mountain until we came to a ledge where, at 7500 ft., we could examine our route of the following day over the next pass. While we ate a late lunch, Joel pointed out our next camp site on N4 and the route we were to take to the northwest up N4. To the left we could look down N4 to the Canoe and the mountains to the S. and S. W. of it. For a mile or two below our proposed camp site, creek N4 is quite flat, but it then drops precipitously to the Canoe. Opposite and to the W. of us was a high mountain which had a cirque facing us and a shrunken glacier now well below the cirque. This glacier, another glacier overflowing from the northwest into the head of N4, and the glacier we had just crossed are the principal sources of the waters of N4. N4 flowed steeply from the N.W. and looked like a sinuous silver ribbon shining in the background of green alpland.

Joel left us after lunch. As we went down toward the camp site at about 6000 ft., we saw about 20 goats feeding in the upper valley and on the mountain adjoining it on the E. It rained hard several times toward evening so that we had trouble establishing a satisfactory camp. I looked forward to the next day, for I hoped that it would disclose the mysteries of the area between Sand Creek and the McLennan. I told Jim that we would stay at this camp at least another night, and that on the next day we would go light and have an easy time exploring the region of the purported additional branches of the McLennan with a view to determining which of the newly discovered peaks we would climb the following day. Joel had spoken of a large glacier we would reach, and when I started to explain to Jim the use of a rope on a glacier and the method of using two ropes if either of us fell into a crevasse, he quickly interrupted me to state that he would take no chances. I made no further explanation then.

A morning rain delayed our start the next day until after 10 o'clock. Our way up the valley was beautiful and easy, being up a gradual but steady ascent on good footing, and to considerable extent we could follow goat trails between low and scrubby trees which did not, however, grow as high as the pass. There were a few flowers here and there as we went up the alpine meadow. I was feeling pretty high, not only because of the beautiful country about me, but in anticipation of the surprises so near at hand. Little did I realize the anti-climax that would soon strike. Jim was a considerable distance ahead, for I could not keep up with

GLACIERS AT HEAD OF 3RD FORK OF McLENNAN

Photos, R. T. Zillmer

LOWER GLACIER
Head of 3rd fork of McLennan

ICE FIELD AND MOUNTAINS
Head of 3rd fork of McLennan

Photos. R. T. Zillmer

his gait. When I caught up with him shortly before noon, a little below the pass, he said very quietly to me, "I can't go any farther. My knee is bad."

I didn't answer for a considerable time—quite different from the quick answers I usually give! But this was something extremely important to me. It seemed as though one year of my life was at stake. I had not noticed any limp. Should I attempt to persuade him to continue? Entirely contrary to my every desire, I decided that I shouldn't, and now I am certain that I determined this matter correctly. So I said, quietly too, as in a dream, and calmly and casually so as not to indicate the terrific turmoil within me, "I suppose this is the end of the trip." He said, quickly, "Yes," and nothing more. I never saw him limp thereafter, nor could I ever keep up with him thereafter. And this did not surprise me.

This was the fifth day of a 21-day trip. The failure of the pack horse was more than compensated for by the help of Joel, and now, with everything within my grasp, I must quit. However, after five minutes, I left Jim and continued alone. I soon reached the pass; in fact, I had directed my course to the W. of the pass so that I was considerably above it when I reached the top. And there it was, just as Joel had said—another branch of the McLennan. I am calling it the second fork of the McLennan, and the branch of two years ago the first fork. I could look straight down the fork into the flats above Valemount, and in the distance immediately in line with the direction of the valley was Mt. Robson, but as usual with its summit in the clouds. But Mt. Longstaff and Mt. Whitehorn, to the left of Robson, were clear. The stream has four branches on the right or southeast side and none on the northwest side. On the left of the stream is a saw-toothed ridge. The direction of the lower two-thirds of the creek is 50° E. of true N., the magnetic deviation in this vicinity being 26° 30′. Blocking the way to the Valemount flats was the green ridge heretofore described.

I continued to the N.W. on rock and then up on a large glacier to a height of 7700 ft., or perhaps over 8000 ft., for the barometer at camp that night showed a drop of 400 ft. It is a large, quite smooth glacier which flows principally to the W. by N. W. to join a long moraine-striped glacier coming from a huge icefall on the S., an icefall that flows from the large icefield we had seen from the S. on our prior trip. The glacier I was on also flows slightly to the second fork of the McLennan and to N4. To the N. was

a low peak which offered a good viewpoint. It seemed easy, so I tried to climb it in my poncho when it started to hail and rain, but it proved too difficult for that, and I was compelled to wait on a ledge until the rain stopped. It was after 3 so I lunched in a cold and cramped position while I waited for the rain to stop, and then I went to the top.

The peak, while not high, is strategically located. The moraine-striped glacier which lay below the icefall is at the head of the third fork of the McLennan, and to the W. of the third fork is a high, steep, narrow ridge behind which is still another fork of the McLennan, and to the N. I could see where the third and fourth forks join. I could see the mountains to the west of the fourth fork which undoubtedly rises from a large glacier which also has its source in the icefield S. of us. The fourth fork is probably the last of the McLennan, so I shall call it the main McLennan and shall number the other forks in the order discovered. The third fork flows 40° E. of N., and the source of the main McLennan 55° E. of N. After the two forks join, the confluent stream, in a gentle curve, turns more and more to the E., to behind or N. of the saw-toothed ridge.

The map which Joel sent me after I returned indicated a pass leading to Sand Creek from below the junction of the third fork and the main McLennan. I did not see and I know nothing of this pass, and I have not been able to question Joel before I write this article, but I am confident that he is right, and in that event it would seem that there can be no other branches of the McLennan other than those already mentioned.

It may seem strange to some that Holway, Carpe, and the Mundays did not see these forks of the McLennan in view of their proximity, but it is understandable to me. The two most westerly forks are very deep and narrow and the mountains W. of them high. It would be difficult to recognize them except from near by. However, it is their failure to see any of the branches of the McLennan that resulted in their mistake of identifying the head of the Canoe as the head of the McLennan. They probably determined that the Canoe was the McLennan because in the Valemount flats the McLennan is the first sizable stream S. of Sand Creek, and in the mountains the Canoe was the first stream that they saw south of Sand Creek. And because of this error, Carpe and Munday insisted that they could not see the Canoe River at all. Carpe, how-

ever, later recognized his mistake when he climbed Mt. Albreda and identified the Canoe River from that viewpoint.[2]

N. by N. E. of the peak I was on was a little glacier which flowed N. and N. W. and gave birth to a creek that joined the third fork. But the view to the S. by S. W. was the climax. It compares favorably with other spectacular mountain views in Canada. An almost vertical icefall, several hundred feet high, flows to a long glacier the lower end of which was hidden behind a ridge and peak N. W. of me. The median moraines on the lower glacier are quite prominent. One may follow them into two dark bands in the icefall, bands which are formed from two cleavers higher up. Above the icefall is a sort of amphitheater of ice which flows from a much higher icefield which reaches farther back and disappears over the horizon to the S. and S. W. The highest peaks are in this icefield on the horizon. Several are over 11,000 ft., and over half a dozen, over 10,000 ft. In the S. E. corner of the icefield there seems to be a pass or low point that may offer a route to the head of N5.

It was difficult to leave this fascinating view, and I did not return to camp until 7. On the way back, Mt. Robson was clear as I passed the second fork and it stood out high above its dwarfed neighbors.

That evening I determined to go out alone, via the third and main forks. Jim would not accompany me, although this route would have been no more difficult than the route by which we had come. I changed my mind, however, during the night, and in the morning we started back and returned as we had come, with one exception. We decided that we would not go back to N3 as we had come, for the way up looked too laborious and not at all like a pass but like a climb over the mountain, so we went down N4 to the lower end of the flats. We then climbed around the south side of the mountain east of us and followed timber line to Joel's camp on N3 where we spent the night.

I learned from Joel that my original plan to reach N3 by pack horse was entirely feasible and that a prospector had once brought his pack horse to that point. Joel had seen the indications of an old route and thought that it could be cleaned out without a great deal of work. The next day we walked beyond our first camp and

[2] *C. A. J.* xvi, 243.

to within a few hours of Doyle's camp, so that in the last day and one-third, we walked as far as we did on the first three days, on two of which we were assisted by horses.

We had some pretty tough bushwhacking at times, especially when we selected a poor route which took us steeply down through alders, willows, and débris into N2. Here, on one occasion, I crashed, made a complete somersault, and landed on my back unscathed in bushes, head downhill, with my arms pinned below me so that I had great difficulty extricating myself. I couldn't find the two ice-axes, however, but Jim found them 15 ft. higher from where I had fallen.

Our last camp was about three hours from Doyle's camp. After we had dinner and after I had erected the tent, Jim, at 8.30, said that he wanted to walk in to Doyle's camp that night. So he left me, taking the gun and assuring me that there would be no danger. I merely said that my nine other trips had been taken without a gun. Darkness compelled him to halt after an hour or so. And he encountered a bear and its cub, the footprints of which I saw the next morning.

The entire trip was a most unusual experience in companionship. I employed a strong, young man with the hope that he would lighten my work a bit. And what occurred? I was the first one up every morning, usually a half-hour before Jim who said it was hard for him to get up on cold mornings. I prepared every meal on the trip but one—the day I climbed alone. I washed and dried all the dishes for every meal but one. I put up the tent and prepared the boughs for every camp. I carried half the load. Why didn't I do something about this? I determined that I would make no effort to remake a matured man. In spite of my disappointing experience, I enjoyed the trip, for I like hard work and I was philosophically determined that no one could deprive me of the joy of the mountains. And I lived a long time in eight days.

The Kinetic Theory of the Origin of Mountain-Making Forces

JOEL E. FISHER

HARDLY a climber who has not sometimes wondered how mountain ranges came to be uplifted. An appreciation of their vast bulk—running far beyond trillions of tons of rock, and of their total uplift, two, three, five miles above sea level, makes this a peculiarly poignant question to a climber, weary and exhausted after having hauled his own mean mass, scarcely one-tenth of a ton, up their last few thousand feet—constituting to him a "great climb." To answer with a trite mention of geological processes is to beg the question, for whence came those forces that made possible these geological processes?

Introduction

The school-day theory of mountain origin compared the crust of the earth, as it cooled, to the wrinkling skin of an apple. Since those days many other theories have been proposed, generally based on a local expansion induced by one cause or another, within the sediments destined to be later themselves folded into mountains.

None of these theories have ever been satisfactorily shown to be capable of producing the great expansions of the earth's crust as recorded through folding and over-riding strata in amounts of hundreds of miles, in the Alps and elsewhere.

In seeking a more acceptable theory, the writer proposes the idea that those forces which compress sediments into mountain folds are primarily developed by the earth's own inertia. More exactly, by changes in the moments of inertia, as between adjacent sectors of the earth, the result of a slight shift in its axis. Such a shift could be produced by movements of sediments about its surface, or similar deformations of its surface, which would measurably alter the kinetic equilibrium of the several sectors of the earth, as it continued to rotate at a constant rate.

Illustration

For a simple illustration, take a flat wooden disc, on which some sand has been evenly sprinkled. Put this disc in a tub of water and spin it. If balanced, it will spin smoothly.

Now brush some of that sand over near one edge; spin it again; unbalanced, it will turn like an eccentric; it will also be obvious that the rim of the disc, immediately under the weight of sand, having a shorter "radius of gyration," is travelling at a smaller lineal velocity than its opposite side.

Then suppose we had two such discs, mounted parallel to each other on a single fixed axis—each disc likewise sprinkled evenly with sand. Now brush the sand on one disc over to one edge, and on the other disc over to the other edge, and give the double-decked disc a spin. It will spin about an axis which is inclined to its original construction. We would say that the "axis of gyration" has been tilted, with respect to the original axis.

Application to the Earth

Applying this principle to the earth, the brushing of sand to one spot on the one disc would represent accumulations of sediments in one sector of the Northern Hemisphere; and on the other disc, represent, of course, accumulations of sediments in an opposite sector in the Southern Hemisphere.

The result would be a tilting of the axis of the earth. It can be shown mathematically that a transfer of sediments involved in laying down Cretaceous rock throughout the world, would be capable of tilting the axis of the earth in the order of magnitude of 10 minutes (⅙ of a degree).

Transformation into Horizontal Forces

Two sets of forces would result in the crust of the earth from such a tilting: (a) North-South forces, and (b) East-West forces; as follows:

As to (a), we know that the equatorial diameter of the earth is 26 miles greater than the polar diameter, on account of the centrifugal force of the earth. If the axis of the earth is tilted, the plane of the equator must also be tilted to agree; and with this, the equatorial bulge will creep N. or S.; in so creeping it must produce N. or S. forces, as it compels the crust in its path to conform to its new position.

As to (b), recalling how, in either disc, a shift in their axis of gyration retarded the lineal velocity of one part of the rim, accelerated the other part—just so, in the earth, the crust on the side

towards which its axis has shifted will be retarded, on the other side, accelerated.

With only a 10′ tilt of the axis, such forces may seem very slight; but the earth is a very massive object, and, rotating with a surface speed of 1000 miles an hour at the equator it does possess an immense inertia. Any attempt to retard any part of it is going to produce a lot of work, just as any attempt to speed any part of it up will require a lot of work.

Because the lineal velocity of any particle of the earth is East-West, such work—be it taken in, or given out—will involve East-West forces.

It must also be recognized that such changes in lineal velocity of one sector of the earth are local—sectors 90° removed are unaffected—forces must develop, therefore, *between* these sectors; and on account of the large area over which such forces must move to find complete equilibrium (up to 90°) forces developed by such kinetic principles are thus seen as uniquely competent to produce the great lineal displacements in the crust of the earth observed in mountain ranges.

Quantitative Calculation

It can be shown mathematically that the total work which can be done by both the North-South and the East-West forces, resulting from a 10′ tilt of the axis, would be theoretically equivalent to lifting 2,000,000 cubic miles of rock four miles vertically against gravity—provided no work was dissipated in friction, heat, or otherwise. As a matter of fact, losses by heat, etc., in any such a process would be very large, involving some two-thirds of all the work, such that at best some 600,000 cubic miles could be expected to be lifted up against gravity, four miles.

We thus have the picture of transfers of sediment such as were involved in laying down Cretaceous rock, as capable of developing kinetic forces in the surface of the earth, sufficient to lift up some 600,000 cubic miles of crust some four miles against gravity, in addition to having done even more work against friction, in the process of folding and faulting the crust.

While the above outlines the mechanical principles involved—and a quick calculation will show that, (a), the quantities of sediments required for transfer are comparable to known records of deposits of sedimentation; and, (b), the resulting available uplift

is comparable to the uplift in major mountain systems—the reader may be interested in a little more specific data, without going into the several mathematical equations.

Additional Comments

(a) The axis may have been translated horizontally, instead of tilted—a translation of 3 miles is about equivalent to a tilt of 10′.

(b) North-South forces and East-West forces from *tilting* are, both, at their maximum at latitude 45° N. or S., and on the meridian toward which the axis has been shifted; tapering off to zero at the equator and poles, and tapering off away from that meridian.

(c) There are no appreciable North-South forces resulting from a *translated* axis.

(d) East-West forces from a *translated* axis are at their maximum at the equator, along the meridian toward which the axis has been shifted, and taper to zero at both poles, and also taper off away from that meridian.

(e) Calculation of the above quantitative figures indicates that the thickness of the completely rigid crust of the earth is only about 30 miles—meaning by completely rigid, the crust which will withstand, without any flowage, stresses that persist for millions of years—long term as opposed to daily tidal or, even shorter, earthquake stresses. (Against these *short term* stresses, experiments have shown even the centrosphere of the earth acts as "more rigid than steel.") Ultra-long term stresses are not to be confused with such near-instantaneous stresses in discussing the reactions of any very viscous substance. Even water is rigid to the unskilled bather who dives into it and hits it on his stomach!

Conditions Under Which Mountain-Making May Result From Such Kinetic Forces

This relatively slight thickness of the outer rigid crust leads on directly to the one process by which, alone, the above kinetic forces, on occasion, fold the crust into mountains, as follows:

As soft yielding sediments accumulate in some great hollow—a geosyncline in geology—they will tend to blanket the radiation of heat from beneath,[1] permitting the temperature of the underlying basement of normally resistant crystalline rock to rise, until

[1] This principle was first developed by Reade in his "Isogeotherm" theory of expansion of sediments into mountain folds.

finally, through long ages, that basement has become so heated and that it is more ready to yield to *long term* stresses. The overlying sediments are of course characteristically weak always.

The reader will realize at this point that these soft, yielding sediments, and now softened underlying basement rock, consitute a weak vertical "crevasse" cutting completely through the otherwise unyielding outer shell of the earth.

Such a "crevasse" of yieldable crust may lie dormant for many geological eras.

Resulting Uplift

If and when an accumulation of sediments somewhere else, by disturbing the earth's axis, starts to develop horizontal forces which happen to run transverse to, and through, this particular weak "crevasse," it is obvious that the yielding rock in this "crevasse" just cannot transmit the resulting horizontal forces as well as the resistant crystalline rocks of the normally rigid outer crust.

Superimposed on these horizontal forces may be additional intermittent seismic stresses, both of which combined may at first cause only small local displacements. Meanwhile, the attendant friction will heat the rock still more. Each such increase in heat will predispose the rock to yield still more easily the next time. The sediments in the crevasse (geosyncline) finally buckle and yield by folding and faulting. Much of the forces will be, of course, dissipated into heat in the process, further expediting "yieldability," but what survive of the forces will expend themselves in doing work against gravity in lifting up thousands of cubic miles of sediment, together, perhaps, with some of the underlying flowable crystalline basement, crumpling them all into folds.

It must be re-emphasized that only when, by chance, a previously prepared "crevasse" of sediments is presented to suitable forces—forces themselves developed and oriented by the chance location of other sedimentary deposits—only then is it possible for this process to carry through. If this combination does not take place, then the sediments in the geosyncline remain undisturbed and the forces generated elsewhere annul themselves in other ways, without producing mountains.

Possible Examples

Without any attempt at complete reconciliation with existing mountain ranges, for some minor ranges are no doubt due to one

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Possible Examples

Without any attempt at complete reconciliation with existing mountain ranges, for some minor ranges are no doubt due to one

theory or another, we have the great range of the Alps-Caucasus-Himalayas, trending East-West, centered not far from latitude 45°, the latitude of maximum effect for North-South forces resulting from a tilt of the axis.

Also, the American Cordillera, running North-South, without a break at the equator, is reasonably the result of a horizontal translation of the axis.

Conclusion

This Kinetic Theory of mountain-making forces is thus offered as the reasonable reaction of the kinetic forces of a rotating body, whose specifications conform with our earth and where there is a priming agency such as erosion; reactions which, when conditions by chance are suitable, will result on occasion in a certain beautiful by-product which we climbers identify as a mountain range.

Postscript

The writer wishes to express his appreciation for the assistance given to him, in working up this Kinetic Theory, by his fellow-member, Professor Rollin T. Chamberlin, and by Professors Chester R. Longwell and Henry Margenau of Yale. Calculations supporting the statements made above will gladly be furnished by the writer to readers interested in a further study. They are not very complicated, and serve to emphasize the extraordinary beauty of balance between the physical characteristics of our own earth. If either its rotational velocity, its size, the density of its outer crust, the density of its centrosphere, or the intensity of solar radiation were changed to any moderate degree, it would appear probable that either terrestrial orogenic activity would be nearly non-existent (with our earth's surface mostly a flat sub-oceanic plain), or so extreme as to involve almost constant earthquakes and volcanic activity. In either case, terrestrial life today might still be in the Mesozoic state. Such is the meaning of our field, the Mountains.

American Alpine Club Annals

J. Monroe Thorington

Introduction

On May 9th, 1901, Professor Angelo Heilprin sponsored a gathering in the rooms of the Geographical Society of Philadelphia (an organization he had founded in 1891) to consider the formation of an Alpine society. The twelve attending at that time were: Edwin Swift Balch, Thomas Willing Balch, Amos Bonsall, Herbert Lawrence Bridgman, Henry Grier Bryant, Frederick Albert Cook, Charles Ernest Fay, Angelo Heilprin, Thomas Roby Hill, Harry Fielding Reid, Israel Cook Russell and George Vaux, Jr.

These were enrolled as members, following which a brief printed circular was mailed to a list of prospective adherents, inviting the recipient to join as a founder, *i.e.,* one who had come in before the adoption of by-laws. It also included a statement of aims and conditions of eligibility and was signed by E. S. Balch, H. F. Reid and A. Heilprin. By March 15th, 1902, enough favorable responses had been received to justify further action, forty-five persons having signified their wish to become members. In December, 1902, the first booklet of the Club listed forty-five names as founders.

The first governing body of the Club was composed as follows: President, Charles E. Fay; Vice-Presidents, Angelo Heilprin and George Davidson; Secretary, Henry G. Bryant; Treasurer, William S. Vaux, Jr.; Councilors, Harry Fielding Reid, John Muir, Israel C. Russell and Harry P. Nichols.

The American Alpine Club differed from some similar organizations in including polar work as well as mountaineering and the study of glacial phenomena as qualifications for entrance, and in having women among its original members. At the first dinner polar exploration was more in evidence than mountaineering, for, as Prof. Fay remarked: "We had at that meeting what certainly at the time was perhaps the most remarkable gathering of polar explorers that could be found in any country. Certainly it is that the body represented the largest amount of Arctic suffering that could have been brought together at any table." At one time six out of twelve honorary members were Arctic explorers.

Schedule of the Annual Meetings of the Club

1st	Annual Meeting—Washington	Jan. 2, 1903—	for year	1902
2nd	Annual Meeting—New York	Dec. 31, 1903—	" "	1903
3d	Annual Meeting—Philadelphia	Dec. 30, 1904—	" "	1904
4th	Annual Meeting—Boston	Dec. 28, 1905—	" "	1905
5th	Annual Meeting—New York	Jan. 7, 1907—	" "	1906
6th	Annual Meeting—Philadelphia	Dec. 30, 1907—	" "	1907
7th	Annual Meeting—Baltimore	Jan. 2, 1909—	" "	1908
8th	Annual Meeting—Boston	Dec. 30, 1909—	" "	1909
9th	Annual Meeting—New York	Dec. 31, 1910—	" "	1910
10th	Annual Meeting—Philadelphia	Dec. 30, 1911—	" "	1911

The first meeting of the Club was held at the Colonial Hotel, Washington, D. C., at 5.30 P.M., January 2nd, 1903, no formal program being presented at the dinner which followed. Nineteen members and guests attended, the active members being: H. L. Bridgman, H. G. Bryant, C. E. Fay, Miss Fay Fuller, A. Heilprin, R. E. Peary, Mrs. Peary, A. L. Rotch and I. C. Russell.

The second meeting was held in the Aldine Association Rooms, 111 Fifth Ave., New York City, on December 31st, 1903. Prof. Heilprin read A. O. Wheeler's "Notes on the Altitudes of Mts. Columbia, Bryce, Lyell and Forbes." At the dinner, F. A. Cook spoke on Mt. McKinley and H. C. Parker described ascents of Mts. Hungabee, Biddle, Deltaform and Goodsir.

The third meeting was held in the rooms of the Geographical Society of Philadelphia, December 30th, 1904, followed by the annual dinner at the University Club, 1510 Walnut St.

The fourth meeting took place in Boston at the rooms of the Appalachian Mountain Club, December 28th, 1905. At the annual dinner, at the Exchange Club, the guest of honor was General Hazard Stevens, who offered his reminiscences of the first ascent of Mt. Rainier, August 17th, 1870.

The fifth meeting was held in New York City at the Explorers Club, January 7th, 1907. Dr. Nichols read extracts from J. N. LeConte's monograph, "The High Sierras." The annual dinner took place in the Café Atelier, 33 W. 67th St. Commander Peary, Dr. F. A. Cook, Captain Bartlett, Prof. H. C. Parker and Belmore Browne attended with other members and guests, before whom Dr. Cook presented his alleged ascent of Mt. McKinley in the preceding year.

The sixth meeting occurred in Philadelphia, December 30th,

1907, at the rooms of the Geographical Society. The secretary read Dr. Workman's paper, "Some Altitude Effects at Camps above 20,000 ft." At the annual dinner, at the Hotel Walton, the Rt. Hon. James Bryce was the guest of honor. G. Vaux, Jr., showed slides of Mt. Assiniboine; H. G. Bryant offered views from the Himalayan foothills; Mrs. Schaffer spoke on exploration near the headwaters of the Saskatchewan and Prof. Fay exhibited Himalayan views from the Sella collection of photographs.

The seventh meeting was held at Baltimore, Md., January 2nd, 1909, at the geological laboratory of Johns Hopkins, in affiliation with the meeting of the American Association for the Advancement of Science. The dinner was at the Hotel Belvedere, where Prof. A. Penck, Kaiser Wilhelm professor at Columbia for 1905, spoke on the high moral attributes usually associated with mountaineers.

The eighth meeting took place at the rooms of the Appalachian Mountain Club in Boston, on December 30th, 1910. H. Palmer described two new ascents in the Selkirks. The Hotel Vendôme was the scene of the annual dinner, A. P. Coleman telling of his attempts to ascend Mt. Robson, and Miss Dora Keen speaking of her climbs in the Southern Andes.

The ninth meeting was held at the Hotel Manhattan, New York City, December 31st, 1910. At the evening dinner, H. C. Parker described the Parker-Browne expedition to Mt. McKinley, and Miss Dora Keen told of her ascents at Chamonix.

The tenth meeting was held at the rooms of the Geographical Society of Philadelphia, December 30th, 1911. F. K. Butters described an expedition to Mt. Sir Sandford. At the dinner, at the Bellevue-Stratford Hotel, Allston Burr detailed the Brenva route on Mont Blanc, and Miss Dora Keen spoke on the first expedition to Mt. Blackburn.

1. The Founding Members

Herewith are presented biographical sketches of the founding members of the American Alpine Club. They form a distinguished group, about which the present membership knows little, only a few of them being mentioned in Howard Palmer's 'Early History' (*A. A. J.*, v. 163).*

* The compiler's thanks are due to Miss Helen Buck, Mr. Francis P. Farquhar and Mr. Duncan McDuffie, of the American Alpine Club, and Mr. Donald G. Onthank, librarian and past president of the Mazamas, for valuable assistance in this work.

The early members of the Club, as a rule, did not document their ascents; the minute books of their time have not survived and the *American Alpine Journal* did not come into being until 1929. Hence, in many cases, it is impossible to give the precise dates of climbs. This has been done, however, when the information was available. Names of non-members and guides have been omitted, but the names of fellow-members on a given ascent have been included when known.

It will be evident that many of the early members could not properly qualify as mountaineers by present standards; but this was our beginning, and an outline of their lives will indicate the character on which the Club is founded.

It is not intended in this work to include biographies of honorary members, as these are available in standard works of reference. Honorary members elected prior to January 1st, 1912 were: The Duke of the Abruzzi (1872-1932; *A. A. J.* ii, 113); J. Norman Collie (1859-1942; *A.A.J.* v, 136); William Martin Conway (1856-1937; *A. A. J.* iii, 209); Douglas William Freshfield (1845-1934; *A. A. J.* ii, 232); Adolphus Washington Greely (1844-1935; *A. A. J.* ii, 529); George Wallace Melville (1841-1912); Robert Edwin Peary (1856-1920); Theodore Roosevelt (1859-1919); James Bryce (1838-1922); W. A. B. Coolidge (1850-1926); Ernest Shackleton (1874-1921); Edward Whymper (1841-1911).

Abbreviations used in the text: *AAJ.* = American Alpine Journal; *AJ.* = Alpine Journal; *App.* = Appalachia; *BGSP.* = Bulletin, Geographical Society of Philadelphia; *CAJ.* = Canadian Alpine Journal; *GJ.* = Geographical Journal; *J. of Geol.* = Journal of Geology; *NEAB.* = National Encyclopedia of American Biography; *Rusk* = *Tales of a Western Mountaineer* (see under C. E. Rusk); *SCB.* = Sierra Club Bulletin; C. = Council; d.m. = died a member; E. = Editor, American Alpine Journal; L. = Librarian; P. = President; S. = Secretary; T. = Treasurer; V.P. = Vice-president.

EDWIN SWIFT BALCH

(Original member, resigned 1904)

Born at Philadelphia, Pa., 1856. Son of Thomas and Emily (Swift) Balch. Brother of T. W. Balch (q.v.). Married (1) Eugenia H. Macfarlane, October 5th, 1904; (2) Emily Tapscott Clark, November 21st, 1924.

Harvard (A.B., 1878). Studied law in office of William Henry Rawle. Admitted to Philadelphia bar, 1882.

President of the Geographical Society of Philadelphia, 1895; corresponding secretary, 1895-99. F.R.G.S.

Joined a gathering in the rooms of the Geographical Society of Philadelphia, May 9th, 1901, to form an Alpine society. E. S. Balch, H. F. Reid (q.v.) and A. Heilprin (q.v.) drew up the first statement of objects and conditions of eligibility which was then sent to prospective adherents.

A supporter of F. A. Cook's claims to Mt. McKinley, for which his 1914 book was largely written.

Author of *Mountain Exploration,* 1893 (*B. G. S. P.* i, 1; the first paper of this publication); *Glaciéres or Freezing Caverns,* 1900; *Antarctica,* 1902; *Comparative Art,* 1906; *The North Pole and Bradley Land,* 1913; *Mount McKinley and Mountain Climbers' Proofs,* 1914; *Arts and Man,* 1918; *Arts of the World,* 1920.

Home: Philadelphia. Died March 15th, 1927. (*Who Was Who; Early American Ascents,* 74, 78.)

1880. Ortler. Also in the Dolomites. During 1880-82 crossed seven passes of the Oetzthal district.

1881. Norway.

1882. Rossbodenjoch, June 22nd; Nadelhorn (2nd ascent), June 29th-30th; Portienhorn (2nd ascent; new route from S.), July 26th; Monte Civetta, Grosse Zinne.

1894. Gross Venediger (with T. W. Balch, q.v.).

Wrote for *App.:* 'Ascents near Saas' (viii, 157); 'Ice Cave Hunting in Central Europe' (viii, 201); 'Reminiscences of Tyrol' (viii, 337); 'High Mountain Ascents' (xii, 30).

THOMAS WILLING BALCH

(Present on May 9, 1901, at the gathering sponsored by Angelo Heilprin in the rooms of the Geographical Society of Philadelphia to consider the formation of an Alpine society, but his name does not appear in the first list of members, December, 1902.)

Born at Wiesbaden, Germany, where his parents had been living for seven years, June 13th, 1866. Son of Thomas and Emily (Swift) Balch. Brother of E. S. Balch (q.v.). Great-grandson of Thomas Willing, a Philadelphia merchant of revolutionary

times, a member of the first Congress and president of the Bank of the United States. Married Dulany Whiting, May 26th, 1923.

Received his early education in France. Harvard (A.B., 1890). U. of Pa. (LL.B., 1895). Trinity (L.H.D., 1917).

Practiced law in Philadelphia from 1895. Manager of Children's Hospital, 1905-15, and of Philadelphia Assemblies, 1909-12. Director of Chesapeake and Delaware Canal Co., 1906-19.

Fellow, American Academy of Arts and Sciences. Collaborator of the Revue de Droit International et de Législation Comparée of Brussels.

Author of many legal and genealogical works and in addition, *Facts About Alsace and Lorraine,* 1895; *The Alasko-Canadian Frontier,* 1902; *The Alaska Frontier,* 1903; *The Arctic and Antarctic Regions and the Law of Nations,* 1910.

Home: Philadelphia. Died June 9th, 1927. (*Who Was Who, Dict. of Amer. Biogr.; Phila. Public Ledger,* June 8th, 1927.)

His mountaineering does not appear to have been extensive and was influenced by his brother. They ascended Gross Venediger together in 1894. T.W.B. travelled in Alaska in preparing his books on that territory.

AMOS BONSALL

(Original member, d. m. 1915)

Born in Delaware Co., Pa., January 20th, 1830. Son of Benjamin and Anne (Heacock) Bonsall. Married Anna W. Wagner.

Bolmar Academy, West Chester, Pa., and medical department, U. of Pa. (1847-48). Lafayette (A.M., 1860).

A farmer. Was 32 years on the board of managers of the Pa. Training School for Feeble-Minded Children, Elwyn, Pa., and 22 years a manager of the Phila. House of Refuge, Glen Mills.

President of the Geographical Society of Philadelphia, 1900-01. In 1853 he accompanied Dr. Kane as master's mate (second in command), U.S.N., to Arctic regions in search of relics of Sir John Franklin.

This, the second Grinnell expedition, of which Bonsall was the last survivor, sailed in the brig *Advance,* June, 1853, passing up South Sound at the head of Baffin Bay into the enclosed sea now known as the Kane Basin. Here, off the coast of Greenland, the expedition passed two winters, accomplishing useful geographical

and scientific work, including what was to be for 16 years the highest northern latitude yet reached: 80° 35′ N. (June, 1854). After great hardship the vessel was abandoned, Upernivik being reached August 5th, 1855, whence a relief expedition brought the explorers home.

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

Home: Philadelphia. Died January 15th, 1915. (*Who Was Who;* W. Elder, *Biography of E. K. Kane,* 273).

HERBERT LAWRENCE BRIDGMAN

(Original member, d. m. 1924)

Born at Amherst, Mass., May 30th, 1844. Son of Richard Baxter and Mary (Nutting) Bridgman. Married Helen Bartlett, September 7th, 1877.

Amherst (B.A., 1866; hon. LL.D., 1920).

In journalism, 1864-. Early employed by *New York Tribune.* For 34 years business manager of *Brooklyn Standard Union,* President, American Publishers Association.

Historian of Peary Auxiliary expedition, 1894. Assistant to Prof. W. Libbey (q.v.) in scaling Mesa Encantada, N.M., 1897. In command of Peary Auxiliary expedition, *Diana,* 1899, and *Erik,* 1901.

Secretary, Peary Arctic Club, New York City. U. S. delegate of National Geographical Society, Peary Arctic and Explorers Clubs to International Congress for Study of Polar Regions, Brussels, 1906. U. S. delegate to International Polar Commission, Brussels, 1908, and Rome, 1913. Lecturer, New York Board of Education, 1895-.

Chevalier, Order of Leopold II, 1908. Officer, Order of St. Alexander (Bulgaria).

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

Author of *The Sudan-Africa from Sea to Center,* 1905.

Home: Brooklyn, N. Y. Died September 24th, 1925, while serving as a State official during a cruise of the schoolship *Newport.* (*Who Was Who;* In Memoriam, *B. G. S. P.* xxiii, 74, by H. G. Bryant.)

Wrote for *B. G. S. P.*: 'Polar Exploration' (xiii, 26).

BOLTON COIT BROWN

(Original member, resigned 1904)

Born at Dresden, N. Y., November 27th, 1864. Son of Edmund Woodward and Martha Day (Coit) Brown. Married Lucy Hines Fletcher, 1895.

Syracuse (Bach. of Painting, 1885; Master, 1885; hon. D. Litt., 1920).

Instructor in drawing, Cornell, 1885-88. Teacher of art, Buchtel Coll., Akron, O., 1889. Principal of Toronto Government Art School, 1890. Organizer, 1891, department of drawing and painting, Stanford U., and professor, 1894-1902.

Scammon lecturer, 1929, and teacher of lithography, 1930, Art Institute of Chicago. Lecturer on lithography, National Academy of Design, N. Y., 1930.

Member of the Sierra Club. Mt. Bolton Brown, in the Sierra Nevada, is named for him.

Author of *The Painter's Palette,* 1915; *Lithography,* 1924; *Lithography for Artists,* 1929.

Home: New York City. Died April 15th, 1936. (*Who Was Who.*)

Nearly all of his climbing was done alone or with his wife. At some time he ascended Mt. Shasta.

1895. Mt. Brewer, Avalanche Pk. (1st ascent), July; Mt. Woodworth (1st ascent), August 1st; Unnamed 11,527′ (1st ascent), August 6th; Mt. Ruskin (1st ascent), August 7th; Arrow Pk. (1st ascent), August 8th.

1896. Buck Rock (1st ascent), June 19th; Mitchell Pk. (1st ascent), June 23rd; Mt. Maddox (1st ascent), June 23rd; Mt. Bago, July; University Pk., July; Unnamed 11,400′ (1st ascent), July; Mt. Gould (with J. N. LeConte, q.v.), July 13th; Mt. Gardiner (1st ascent; with J. N. LeConte), July; Mt. Williamson (new route), July; Crag Ericsson (1st ascent), August 1st; Mt. Stanford (1st ascent), August 1st; Mt. King (1st ascent).

1898. Diamond Mesa (1st ascent), July 10th.

1899. Solitude Pk. (1st ascent).

1900. Buck Rock, December.

Wrote for *S. C. B.*: 'Three Days with Mt. King' (i, 241); 'A Trip About the Headwaters of the South and Middle Forks of Kings River' (i, 293); 'Wanderings in the High Sierra Between

Mt. King and Mt. Williamson' (ii, 17, 90); 'Another Paradise' (iii, 135); 'A Glimpse of the Winter Sierra' (iii, 242).

WILLIAM ADAMS BROWN

(Original member, d. m. 1943)

Born at New York, N. Y., December 29th, 1865. Son of John Crosby and Mary E. (Adams) Brown. Married Helen Gilman Noyes, March 30th, 1892.

Educated at St. Paul's School, Concord, N. H. Yale (A.B., 1886, A.M., 1888, Ph.D., 1901, D.D., 1907). Union Theological Seminary, 1890. U. of Berlin, 1890-92, D.D. Union Coll., 1903; Yale, 1907; St. Andrews, 1922. Phi Beta Kappa.

Ordained to Presbyterian ministry, 1893. Instructor, 1892-95, provisional professor, 1895-98, Roosevelt professor of systematic theology, 1898-, Union Theological Seminary. Member of the Yale Corporation. Acting provost, Yale, 1919-20.

Vice-president, Constantinople Woman's College. Director, N. Y. Inst. for the Deaf and Dumb. Member of the Federal Council of Churches of Christ in America, American Philosophical Society, American Association for the Advancement of Science. Patron, Metropolitan Museum of Art.

Author of *Musical Instruments and their Homes,* 1888; *The Essence of Christianity,* 1902; *Christian Theology in Outline,* 1906; *Life of Morris K. Jesup,* 1910; *The Christian Hope,* 1912; *Modern Theology and the Preaching of the Gospel,* 1914; *Is Christianity Practicable?* 1916; *Modern Missions in the Far East,* 1917; *The Church in America,* 1922; *Imperialistic Religion and the Religion of Democracy; The Creative Experience,* 1923; *The Life of Prayer in a World of Science,* 1926; *Beliefs That Matter,* 1928.

Home: New York City. Died December 16th, 1943. (*Who's Who;* In Memoriam, *A.A.J.* v, 297, by H. Palmer.)

Recorded but undated climbs are: Wetterhorn, Monte Rosa, Zinal Rothhorn, Weisshorn, Matterhorn, Piz Bernina (August, 1903).

HENRY GRIER BRYANT

(Original member, S. 1902-11, V. P. 1911-13, P. 1914-16, C. 1917-22, d. m. 1932)

Born at Allegheny, Pa., November 7th, 1859. Son of Walter and Ellen A. (Henderson) Bryant. Unmarried.

Phillips Academy, Exeter, N. H., 1876-79. Princeton (A.B., 1883; A.M., 1886). U. of Pa. (LL.B., 1886).

Admitted to the bar and practiced law in Philadelphia.

Explored the Grand Falls of Labrador, 1891. Second in command, Peary Relief expedition (the leader being A. Heilprin, q.v.), 1892. Commander of Peary Auxiliary expedition, 1894. Commander of Mt. St. Elias expedition, 1897. Explored St. Augustine River, Labrador, 1912.

With Admiral Melville (1841-1912; hon. A.A.C.) conducted the experiment of floating drift-casks to determine the speed and direction of ocean currents.

President of the Geographical Society of Philadelphia, 1897-99, 1904-05, 1909-10, 1916-17, 1920-21, 1923-24, 1927-28, 1931-. This society now awards the Bryant gold medal (for which he left funds) for distinguished contributions to geography. President of the Association of American Geographers, 1913.

F.R.G.S. Honorary member of the French Alpine Club. Corresponding member of the Geographical Society of Geneva, the Geographical and Anthropological Society of Stockholm, and of the Appalachian Mountain Club. Councilor of the American Philosophical Society. Officier de l'Academie (France).

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized. As first secretary, he maintained the organization through critical years. He arranged the Club's incorporation (1915) and created its library fund, leaving to the Club his mountaineering books.

Bryant Creek, in the Canadian Rockies, is named for him. Dr. Cook, during his 1903 expedition to Mt. McKinley, named the small group between Mt. Dall and Mt. Russell, Bryant Peaks.

Home: Philadelphia. Died December 7th, 1932. (*Who Was Who; Early American Ascents,* 79; In Memoriam, with portrait, *A.A.J.* ii, 108, by J. M. Thorington and H. Palmer, also *B.G.S.P.* xxxi, 37).

1886. Breithorn.

1889. Selkirks: Eagle Pk. (new route on S. face, traversing N.W. ridge to Avalanche col).

1897. Alaska: Chilkoot Pass. First crossing of Malaspina Glacier in attempt to reach Mt. St. Elias.

1899. Canadian Rockies: Attempt on Mt. Assiniboine.

1901. Canadian Rockies: Attempt on Mt. Assiniboine (reached 11,000 ft., with W. D. Wilcox, q.v.), July 30th; same party also visited the then unmapped area S. of Kananaskis Lakes.

1904. Popocatepetl, May 8th.

1905. Mauna Loa (April).

1906. Ceylon: Pidauru Talagala, May 2nd.

1907. Java: Bromo Volcano, February 4th. Japan: Nantai-San, June 15th. Canadian Rockies: Duchesnay and Abbot Passes (via Lake O'Hara), August 13th-14th.

1908. Jungfrau (from Bergli Hut). Tour of Monte Rosa.

1910. Spitzbergen: Mt. Nordenskiold.

1915. Crossed the Andes.

1921. Mt. Whitney. Packtrain over John Muir trail from Giant Forest to Yosemite.

1925. (Aet. 66.) Dolomites: Gares to San Martino di Castrozza, via Val de Comelle, Pian delle Comelle and Rosetta Hut. San Martino di Castrozza to Primiero via Passo di Ball. Canazei to Karersee by high level route: Sella Pass, Rodella, Seiser Alp, Schlern and Vajolet Hut.

Wrote for *B. G. S. P.*: 'Grand Falls of Labrador' (i, 37; also in *Century*, Sept. 1892); 'Peary Auxiliary Expedition' (1, 141); 'Drift Casks' (ii, 70; xi, 1; xxii, 111; also in *Proc. Am. Philosophical Soc.*, lxi); 'A Traveller's Notes on Java' (vi, 33); 'An Early American Arctic Expedition' (vii, 145); 'Expedition to Labrador' (x, 246); 'An Exploration in Southeastern Labrador' (xi, 1); 'French Indo-China' (xvii, 37); 'History of the First 25 Years of the Geographical Society of Philadelphia' (xv, 44). In Memoriam: Melville (x, 132); Shackleton (xxi, 148); Bridgman (xxii, 74); Nansen (xxviii, 211). Also, 'Record of the United States in Geography' (*Int. Cong. of Geogr.*, Rome, 1914).

ALBERT J. CAPRON

(Original member, resigned 1904)

No biographical information. Member of the Mazamas (1899-1904); active on publication and outing committees (corresponding secretary, 1901-02).

Home: Portland, Ore.

Recorded but undated ascents are: Mt. Blaine, Holy Cross Mtn.

1899. Mt. Hood.
1901. Mt. Hood, July 17th and 19th.

Wrote: 'The Inspiration of Mountain Climbing' (Portland *Oregonian,* June 7th, 1903; reprinted from New York *Independent*). His portrait appears in the *Oregonian* reprint.

FREDERICK ALBERT COOK
(Original member, expelled 1910)

Born at Callicoon Dept., N. Y., June 10th, 1865. Son of Albert and Magdalene Cook (the family name was originally Koch). Married Mary Fidele Hunt, June 10th, 1902.

Educated in Callicoon, N. Y., 1871-78, and Brooklyn, 1878-85. U. of New York (M.D., 1890).

Surgeon of the Belgian (Gerlache) Antarctic expedition, 1897-99, and Peary Arctic expedition, 1891-92.

Order of Leopold. Gold medal of the Royal Society of Belgium. Silver medal of the Royal Geographical Society of Belgium. Member of American, National, and Philadelphia Geographical Societies.

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

Led expeditions, financed by *Harper's Monthly,* to explore and climb Mt. McKinley in 1903 and 1906. On the first of these (1903) he traversed the Alaska Range, encircling the McKinley Group, travelling 700 miles on foot, 300 miles by raft and boat and ascending the mountain from the W., via Peters Glacier, to 8000 ft. (This was the second expedition to attempt the ascent, Cook having been preceded only by Judge Wickersham in May, 1903. For the exploratory history of Mt. McKinley, see *A. A. J.* ii, 121.)

On the second expedition (1906), of which H. C. Parker (q.v.) and B. Browne (A. A. C., 1913) were members, the ascent was undertaken by way of Ruth Glacier (the S. glacier named for Cook's daughter). Cook presented no photographs taken closer than the foot of the mountain, although he claimed to have reached the summit on September 16th. It was then known that he had been absent too short a time to allow his even reaching the mountain. It should be added that neither Parker nor Browne took part in this hurried final effort. Cook's "Top of Our Continent" photograph was shown by H. C. Parker in 1910 to have been made

on a point only 250 ft. above Ruth Glacier and almost 20 miles from the summit of Mt. McKinley. C. E. Rusk (q.v.), leader of the Mazama expedition of 1910, came to a similar independent conclusion.

One of Cook's companions in 1906 (Beecher) wrote of him: "He was an excellent camp man, always good humored, ready to do his full share and more; courageous and simple, but not a man of good judgment in practical affairs. He seemed to have trouble whenever he had financial dealings. I think he claimed the ascent of McKinley, not so much through vanity and love of what glory might be in it, but because he hoped to establish a reputation that would give him backing for a polar expedition, which he always had in mind, and which he succeeded in getting."

Although the falsity of Cook's claim was known by the end of the 1906 expedition, nothing could be done immediately as the doctor's book had not appeared and, in the meantime, he sailed *secretly* for the North.

On September 1st, 1909, five days before the news came of Peary's success, Dr. Cook, returning from Greenland to Europe on a Danish ship, claimed that he had reached the North Pole on April 21st, 1908. He had accompanied an expedition northward in 1907, prepared to attempt to reach the North Pole, and according to his own story had done so, leaving his party and taking only some Eskimos early in 1908. Cook's claim to have forestalled Peary was at first credited in various circles, particularly in Denmark, but after a prolonged dispute, a special committee of the U. of Copenhagen, to whom his documents were submitted, declared that they contained no proof that he had reached the Pole.

The truth of the McKinley episode then came out and Cook was denounced on this score as well, Parker and Browne laying their statements and proof before the American Geographical Society and the Explorers Club. The detailed evidence will be found in Browne's *The Conquest of Mt. McKinley* (1913), pp. 71-73; 117-123. The Explorers Club requested Dr. Cook to reply before a committee, but he evaded this and did not appear on the final date set, going into hiding for a year.

He later became involved in questionable stock promotion and served a term in the penitentiary. It is fair to repeat that, in his early days, Cook was regarded as a man of charm and energy, and

that mental derangement may have caused his later digressions.

Author of *Through the First Antarctic Night,* 1900; *To the Top of the Continent,* 1908 (portrait facing p. 2); *My Attainment of the Pole,* 1911.

Home: Brooklyn, N. Y. Died August 5th, 1940. (*Who Was Who; Encycl. Brit.; N. E. A. B.* 13:338; portraits *Pacific Monthly* xxiv, 259, 262.)

Wrote: 'The Antarctic Challenge to the Explorer' (*Forum,* June, 1894); 'Medical Observation Among the Eskimos' (N. Y. *J. of Gyn. and Obstet.,* March, 1894); 'The South Pole and Its Problems' (Boston *Commonwealth,* March 16th, 1895); 'Some Physiological Effects of Arctic Cold, Darkness and Light' (*Med. Rec.,* June 13th, 1897); 'The Frozen South' (*Harper's Weekly,* July 22nd, 1899); 'Two Thousand Miles in the Antarctic Ice' (*McClure's,* November, 1899); 'The Possibilities of Antarctic Exploration' (*Scribner's,* December, 1899); 'The New Antarctic Discoveries' (*Century,* January, 1900); 'The Great Indians of Terra del Fuego' (*Century,* March, 1900); 'The Possibilities of Human Life Within the Antarctic' (*Independent,* June, 1900); 'America's Unconquered Mountain' (*Harper's,* January, 1904); 'The Conquest of Mt. McKinley' (*Harper's,* May, 1907).

EDWARD SHERRIFF CURTIS

(Original member, resigned 1923)

Born at Madison, Wis., February 19th, 1868. Son of Johnson and Ellen (Sherriff) Curtis. Married Clara J. Phillips, June, 1892.

Educated in public schools, Madison, Wis.

For many years lived in Seattle, Wash. Honorary member of the Mazamas (1897) "on account of services rendered in conducting the safe ascent of Mt. Rainier." Fellow of the Royal Society.

Official photographer for the Harriman Alaska expedition, 1898. In 1906, under the patronage of J. Pierpont Morgan, he was enabled to organize The North American Indian, Inc., which published a sumptuous set in 20 vols. (1907-30) on the history and anthropology of the North American Indian, of which publication he was both author and photographer. The foreword was written by T. Roosevelt.

Author of *Indian Days of Long Ago,* 1914; *In the Land of the Head-Hunters,* 1915; *The North American Indian,* 1907-30.
Home: Colfax, Cal. (*Who's Who;* 1930 edit.)

Is said to have ascended numerous peaks in Washington and Oregon. Made a trip through the Sierra Nevada with Stephen T. Mather about 1917.

1897. Was a member of a party of twenty on Pinnacle Pk. Went with E. T. Parsons (q.v.) to Camp Muir, Mt. Rainier, after which Curtis was appointed guide and leader of the Mazama party which made the ascent, July 26th-27th.

1898. Mt. St. Helens (leader), July 21st.

THOMAS DeWITT CUYLER

(Original member, d. m. 1922)

Born at Philadelphia, Pa., September 28th, 1854. Son of Theodore and Mary (de Witt) Cuyler. Married Frances Lewis, May 3rd, 1881.

Yale (B.A., 1874). Lafayette (LL.D., 1916). Yale (LL.D., 1920).

Admitted to Pennsylvania bar, 1876. Served as judge advocate general, National Guard of Pennsylvania. Director of Pa. Railroad Co., Equitable Life Assurance Society and other corporations. Chairman, Association of Railway Executives.

Home: Haverford, Pa. Died November 2nd, 1922. (*Who Was Who.*)

Between 1869 and 1905 he made numerous minor climbs in the Alps during many seasons. Recorded but undated ascents are: Matterhorn (twice; Swiss and Italian sides); Jungfrau (twice); Mönch (twice); Eiger (twice); Finsteraarhorn, Piz Bernina, Piz Julier.

GEORGE DAVIDSON

(Original member, V. P. 1902-05, resigned 1905)

Born at Nottingham, England, May 5, 1825. Son of Thomas and Janet (Drummond) Davidson. Married Elinor Fauntleroy, October 5th, 1859.

Came to U. S. in 1832. Educated at Central High School, Philadelphia (A.B., 1845; A.M., 1850). Santa Clara Coll. (Ph.D., 1876), U. of Pa. (Sc.D., 1889), U. of Cal. (LL.D., 1910).

Secretary to Prof. A. D. Bache, superintendent of the Coast Survey, 1845-46. Member of the U. S. Coast and Geodetic Survey, 1845-95. In geodetic, field and astronomical work in the Eastern States, 1845-50. In coast survey work of California, Oregon, Washington and Alaska, 1850-95. In charge of Pacific Coast work, 1868-95.

Hon. professor of geodesy and astronomy, 1870-, regent, 1877-85, and professor of geography, 1898-, U. of Cal. Expert for the mints of Philadelphia and San Francisco, 1872, 1885-86. Member of the Irrigation Commission of Cal., 1873-74; also for India and Egypt, 1875. Member of U. S. Advisory Board of Harbor Improvements, San Francisco, 1873-76.

In charge of the Transit of Venus expedition (of which I. C. Russell, q.v., was a member) to Japan, 1874, and New Mexico, 1882. Member of the Mississippi River Commission, 1888-90. Special agent for the U. S. to the 9th International Geodetic Congress, Paris, 1889.

Fellow of the American Academy of Sciences and Arts, and of the American Association for the Advancement of Science. President, California Academy of Sciences, 1871-87. Medal, Paris Exposition, 1878; Daly gold medal of the American Geographical Society, 1908; Order of St. Olaf (Norway), 1907.

Charter member and for many years a director of the Sierra Club. Conducted important triangulation work in the Sierra Nevada, using Mt. Conness as a station.

In the early '50s he witnessed an eruption of Mt. Baker (*Rusk,* 135). Made the first ascent of the Aleutian volcano, Mt. Makushin, September 7th, 1867.

Home: Berkeley, Cal. Died December 1st, 1911. (*Who Was Who;* In Memoriam, with portrait, *S. C. B.* viii, 212.)

Wrote for *App.:* 'The First Ascent of the Volcano Makushin' (iv, 1); for *S. C. B.:* 'The Name "Mt. Rainier' (vi, 87); also, 'The Occupation of Mount Conness' (*Overland,* February, 1892); 'The Glaciers of Alaska that are Shown on Russian Charts' (*Trans. and Proc. Geog. Soc. Pacific,* 2nd series, vol. iii).

ANDREW ELLICOTT DOUGLASS

(Original member, d. m. 1911)

Born at Windsor, Vt., in 1867. Son of Rev. Malcolm Douglass. Unmarried.

Punchard Free (High) School, Andover, Mass., until 1884. Trinity (A.B., 1899).

Employed in astronomical work at Harvard College Observatory, 1889-94, then at Lowell Observatory, Flagstaff, Ariz. Fellow, Royal Astronomical Society.

Died in 1911. (*Who Was Who.*)

Recorded but undated ascents are: various ascents in the Peruvian Andes; Popocatepetl, Orizaba.

August, 1903 and June 9th-10th, 1904. San Francisco Peaks, Arizona.

Wrote for *App.*: 'An Ascent of Popocatepetl' (viii, 221); 'The Altitudes of Orizaba and Popocatepetl' (viii, 336); 'Effects of High-Altitude Climbing' (viii, 361); 'The Crescentic Dunes of Peru' (xii, 34).

OLIVER CUMMINGS FARRINGTON

(Original member, resigned 1907)

Born at Brewer, Me., October 9th, 1864. Son of Joseph Rider and Ellen E. (Holyoke) Farrington. Married Clara A. Bradley, August 3rd, 1896.

U. of Me. (B.S., 1881; M.S., 1888). Yale (Ph.D., 1891).

Teacher of science in academies, 1882-87. Laboratory assistant, Yale, 1890-91. Assistant of U. S. Natural History Museum, 1893. Curator, Field Museum of Natural History, 1894-.

Lecturer on mineralogy, U. of Chicago, 1894-1904. Collaborator, mines and minerals, Paris Exposition, 1900. President, American Association of Museums, 1915-16. Fellow, Geological Society of America and American Association for the Advancement of Science. Member of Field Museum expedition to Brazil, 1922-23.

Author of many geological papers and of *Observations on Popocatepetl and Ixtaccihuatl,* 1897; *Gems and Gem Minerals,* 1903; *Meteorites,* 1915.

Home: Chicago. Died November 2nd, 1933. (*Who Was Who.*)

Recorded but undated ascents are: Popocatepetl, Ixtaccihuatl (to Porfirio Diaz Glacier).

CHARLES ERNEST FAY

(Original member, P. 1902-07, V. P. 1908-10, P. 1917-19, d. m. 1931)

Born at Roxbury, Mass., March 10th, 1846. Son of Rev. Cyrus Hyde and Anne (Hyne) Fay. His mother, a native of Tavistock, Devonshire, England, died when he was four years old. Married Mary W. Lincoln, November 22nd, 1870.

Tufts College (A.B., 1868; A.M., 1872; Litt.D., 1900; LL.D., 1928). Phi Beta Kappa.

Instructor in mathematics, 1868, and in modern languages, 1869, Tufts College. On leave of absence in Europe, 1869-70. Wade professor of modern languages, 1871-1928, and dean of the Graduate School, 1912-23, Tufts College. Bore a part in founding the Modern Language Association of America, 1883, and of the N. E. Association of Colleges and Preparatory Schools, 1885.

First president of the American Alpine Club, being present at the initial meeting in Philadelphia, May 9th, 1901. A founder of the Appalachian Mountain Club (president 1878, 1881, 1893, 1905). Hon. member of the Alpine Club (London), of the Italian Alpine Club and the Centro Excursionista de Cataluna. An original honorary member of the Alpine Club of Canada (1906). Corresponding member of the Geographical Society of Philadelphia. Fellow, Harvard Travellers Club (vice-president 1911-12; gold medalist, 1922). Officer of the Order of St. Charles, Monaco, 1921.

Editor of *Appalachia,* 1879-1920; editor of *Alpina Americana,* 1907-14, author of its second monograph, 'The Rocky Mountains of Canada' (1911). He instigated the printing of American Alpine Club notes in *Appalachia,* December, 1905. He was unofficial agent for the successful Italian expedition to Mt. St. Elias (1897), which began his long friendship with V. Sella and led to the latter's election to honorary membership in the American Alpine Club.

In the Selkirks the name Mt. Afton is a contraction of the names Abbot, Fay and Thompson. Mt. Fay and the Fay Hut (1927), in the Canadian Rockies, are named for him.

Home: Medford, Mass. Died January 25th, 1931. (*Who Was Who;* In Memoriam, with portrait, *A. A. J.* i, 373, by J. W. A. Hickson; *App.* xviii, 303; with portrait, *C. A. J.* xix, 134, by A. O. *Wheeler;* also, *A.J. 44,* 116.)

1888, 1890. Visited Colorado and California. Mt. San An-

tonio and 14,000 ft. peak adjacent to Sierra Blanca. Selkirks: Attempt (alone) on Mt. Sir Donald.

1894. Selkirks: Mt. Abbott (2nd ascent; with R. F. Curtis, q.v.). Attempt on Eagle Pk.

1895. Canadian Rockies and Selkirks: Mt. Hector (1st ascent; with C. S. Thompson, q.v.) July 30th; Mt. Stephen (3rd ascent). Castor Pk., Rampart (both 1st ascents with C. S. Thompson).

1896. Canadian Rockies: Attempt on Mt. Lefroy (with G. T. Little, q.v., C. S. Thompson, Philip Abbot losing his life on this occasion).

1897. Canadian Rockies and Selkirks: Dome (1st ascent; with C. L. Noyes, q.v., J. R. Vanderlip); Pollux Pk. (1st ascent; same party). Mt. Lefroy (1st ascent; with H. C. Parker, q.v., C. S. Thompson, J. R. Vanderlip), August 3rd; Mt. Victoria (1st ascent), August 3rd; Mt. Gordon (1st ascent; with H. C. Parker, C. S. Thompson), August 10th.

1898. Canadian Rockies: Abbot Pass (1st crossing; with R. F. Curtis); Mt. Niles (1st ascent); Mt. Balfour (attempt with R. F. Curtis). Pipestone and Dolomite Passes, Cirque Pk. (1st ascent; with R. F. Curtis, H. P. Nichols, C. S. Thompson, G. M. Weed, q.v.), August 4th.

1899. Selkirks: Mt. Dawson (Häsler Pk., 1st ascent; with H. C. Parker), June 24th; Eagle Pk. (new route by S.E. arête).

1901. Canadian Rockies: Mt. Vaux (1st ascent), July 16th; attempts on Chancellor Pk. and Mt. Goodsir (S.) (all with J. H. Scattergood, q.v.).

1903. Canadian Rockies: Mt. Goodsir (S. tower, 1st ascent; with H. C. Parker), July 16th; Cathedral Pass (1st crossing), August; Mt. Daly (1st ascent), August 23rd.

1904. Canadian Rockies: Mt. Fay (2nd ascent; he was forestalled by the action of the guides, Kaufmann, from making the 1st ascent; see *A.A.J.* v, 152), July 21st; Mt. Temple (S.E. arête), August 5th.

1905. Went as far as Gibraltar, July 25th, with Mt. Rainier party including J. H. Cameron (q.v.), C. E. Rusk (q.v.), C. H. Sholes (q.v.). Fay was then leader of a party of 27 members of A. M. C. who camped with the Sierra Club. He then joined the Mazamas as their official guest (*Rusk*, 141; *Mazama* ii, 225).

1907. Represented the A. A. C. and A. M.C. at the Alpine Club's jubilee dinner in London.

1910. White Mtns., with his daughter. In one day they crossed Chocorua, Paugus, Passaconaway and Whiteface, covering 10,000 ft. of ascent and 18 miles of trail; in his 65th year.

1913. Canadian Rockies: Mumm Pk.

1921. A. A. C. delegate to International Congress of Alpinism, Monaco.

1923. Canadian Rockies: Attended A. C. C. camp at Larch Valley.

1930. (Aet. 84.) Canadian Rockies: Visited Fay Hut and attended A. C. C. camp at Maligne Lake.

Wrote for *App.:* 'A Day on Tripyramid' (i, 14); 'Concerning the Name of Black Mountain' (i, 119); 'Mount Carrigain' (ii, 108); 'The Love of Nature among Americans' (ii, 255); 'Exploration of a Gorge on Mt. Lincoln' (ii, 286); 'The March of Captain Samuel Willard' (ii, 336); 'Discovery of a Natural Camp in Kings Ravine' (iii, 74); 'Optical Illusions among the Mountains' (iii, 323); 'Was Chocorua the Original Pigwacket Hill?' (iv, 322); 'An Ascent of Mt. Shavano' (v, 236); 'Through San Luis Park to Sierra Blanca' (v, 261); 'In the Sierra Madre Mountains' (vi, 208); 'Mount Passaconaway' (vi, 302); 'An Excursion from Mt. Whiteface to Greeley's' (vi, 342); 'An Ascent of Black Snout' (vi, 345); 'Up the Crags of Sir Donald' (vii, 157); 'The Sella Exhibition' (vii, 229); 'A Partial Ascent of Mt. Stephen' (vii, 288); 'Our Bivouac on Eagle Peak' (vii, 297); 'Another Story of Mt. Stephen' (viii, 26); 'The Casualty on Mt. Lefroy' (viii, 133); 'The First Ascent of Mount Victoria' (ix, 1); 'The Southern End of the Waputehk Snow-Field' (ix, 93); The First Ascent of Mt. Dawson' (ix, 217); 'The Resort to Glacier House' (ix, 273); 'The Conquest of Mt. Goodsir' (x, 285); 'The Mountains as an Influence in Modern Life' (xi, 27); 'The Continental Divide on the Bow Range' (xi, 126); 'A Long Day on the Sandwich Range' (xii, 247); 'The Canadian Rockies to Date' (xiii, 114); for *Mazama:* 'Through Appalachian Eyes' (Mt. Rainier; ii, 208); for *Mountaineer:* 'International Conference of Mountaineering Clubs' (xiii, 62). Also, 'Alpine Climbing in America' (*Munsey's,* March, 1901); 'Mountain Climbing as an Organized Sport' (*Outlook,* June 7th, 1902); 'Pioneer Climbing in a New Switzerland (*Technical World,* February, 1905); 'The World's Highest Altitudes and First Ascents' (*Natl. Geogr. Mag.,*

June, 1909); 'Recent Mountaineering in the Canadian Alps' (*Geogr. Rev.*, July, 1916); 'The Conquest of the Peaks' (*Mentor*, April, 1913).

EDWINA FAY FULLER

(Original member, resigned 1904)

Born at Summit, N. J., in 1869. Daughter of Edward N. and Augusta E. (Morrison) Fuller. A direct descendant of Dr. Samuel Fuller, of the Mayflower Colony, the first physician in New England. Her father was a journalist and publisher of *The Tacomian*. She married Fritz von Briesen in 1905.

Attended public schools in Chicago, Ill., and Tacoma, Wash.

Taught for five years in and near Tacoma, after which she went into newspaper work on Tacoma and Oregon papers. In July, 1899, she became assistant editor of *Every Sunday*, and also contributed to the *Tacoma Daily Ledger*. She was the first woman member of the Washington (State) Press Association. During five years of residence in Washington, D. C., she was connected with the U. S. Census Bureau and (1902) the U. S. Geological Survey.

Following her marriage, she lived in New York City, where she and her husband were active members of the Green Mountain Club, contributing the Fay Fuller Hut, situated near Bennington, Vt.

A founding member of the *Mazamas* (1894; vice-president, 1895-98). Member of Green Mountain Club.

Fay Pk., in the N.W. corner of Mt. Rainier Park, is named for her.

Home: New York City. (Washington Press Association *Proceedings*, with portrait, 1887-90.)

Recorded but undated ascents are: Mt. Pit (Mt. McLoughlin), Mt. Sahale.

1890. Mt. Rainier (1st ascent by a woman), August 10th.

1894. Mt. Hood, July 19th (with W. G. Steel, q.v., and others, at which time the Mazamas was founded).

1895. Mt. Adams, July 10th.

1897. Mt. Rainier, July 27th.

1901. Mt. Hood, July 10th.

1934. Visited Death Valley with C. E. Sholes (q.v.).

Wrote for *Mazama:* 'Historian's Report for 1894' (i, 15).

ANGELO HEILPRIN

(Original member, V. P. 1902-07, d. m. 1907)

Born at Satóralja-Ujely, Hungary, March 31st, 1853. Son of Michael and Henrietta Heilprin. Unmarried.

Came to U. S. with his parents in 1856, but was educated in Europe, making a special study of natural history.

Professor of invertebrate paleontology and geology, 1880-90, executive curator, 1883-92, Academy of Natural Sciences, Philadelphia. Professor of geology, Wagner Free Institute, 1885-90. After 1890 he held a chair of geography at Yale.

Founder (1891) and first president (1891-94, 1896, 1902-03) of the Geographical Society of Philadelphia (which presents annually the Heilprin Memorial lecture). Leader of Peary Relief expedition, 1892. Heilprin Glacier, Greenland, and Heilprin Land, are named for him.

On May 9th, 1901, he sponsored a gathering in the rooms of the Geographical Society of Philadelphia on the matter of forming an Alpine society. Twelve were enrolled as members. A brief printed circular was then mailed to a list of prospective adherents and invited the recipient to join the association as a founder, *i.e.*, one who had come in before the adoption of by-laws. It also included a statement of objects and conditions of eligibility and was signed by E. S. Balch (q.v.), H. F. Reid (q.v.), and A. Heilprin. Heilprin was elected the first vice-president of the Club

Author of *The Animal Life of our Seashore,* 1888; *The Bermuda Islands,* 1889; *Principles of Geology,* 1890; *Peary Relief Expedition,* 1893; *The Earth and its Story,* 1896; *Alaska and the Klondike,* 1899; *Mont Pelée and the Tragedy of Martinique,* 1903; *Tower of Pelée,* 1905.

Home: Philadelphia. Died July 17th, 1907, as a result of tropical fever contracted on his journey to Venezuela earlier in that year. (*Who Was Who;* port. *A. A. J.* iv, facing p. 169; *B. G. S. P.* v, 277; Geographical Society of Philadelphia, *Fiftieth Anniversary,* 17; G. Pollak, *Michael Heilprin and His Sons,* 1912.)

1890. Led an expedition of the Academy of Natural Sciences to examine the physical features of the great Mexican volcanoes, with special reference to the vertical distribution of animal and vegetable forms. Within three weeks he ascended Orizaba, Popocatepetl, Ixtaccihuatl and Nevado de Toluca (*Proc. Acad. Nat. Sc. of Phila.,* xliii, 251). His elevation figure for Orizaba was

18,205 ft., and the mountain was then thought to be the loftiest in North America, since it was believed to overtop Mt. St. Elias, the highest Alaskan peak which at that time had been measured. (In 1898, Muldrow and Eldridge first determined Mt. McKinley's position and elevation.)

1891. On Peary's ship, the *Kite,* in charge of the West Greenland expedition.

1892. Leader of Peary Relief expedition to Greenland.

1896. Attended Mining and Geological Congress at Budapest, thence making a journey through the Atlas Mountains of Algeria and Morocco.

1898. Visited Alaska.

1900. National Geographic Society delegate (with W. D. Wilcox, q.v.) to Geographical Congress of Paris Exposition.

1902. Sailed for Martinique two weeks after the catastrophe of May 8th. Ascended Mt. Pelée on June 1st.

1903. Mt. Pelée (his 4th ascent), June 13th.

Wrote for *B. G. S. P.:* 'Progress of Discovery' (i, 85); also, 'Exploration in Mexico' (*Proc. Acad. Nat. Sc. of Phila.,* xliii, 251); 'Mt. Pelée in its Might' (*McClure's*).

THOMAS ROBY HILL

(Original member, resigned 1904)

Born at Cambridge, Mass., February 22nd, 1864. Son of Thomas and Anne Foster (Bellows) Hill. His father was president of Harvard 1864-68, and after his resignation went with Agassiz to South America in 1871. T. R. H. married Jennie M. Monroe, June 6th, 1889.

Educated at Knapp School, Plymouth, Mass., and Portland, Me., High School.

He was first employed as an engineer at Portland, Me., and then with his uncle, Raphael Pumpelly (1837-1923), geologist and mining engineer, on the Northern Transcontinental Survey (1881-84), during which mineral and agricultural resources were examined contiguous to the lines of the Northern Pacific Railroad and the Oregon Railway and Navigation Co. The expedition traversed the country afterward included in Glacier National Park. He also spent two years in North Central Alaska as a mining engineer, going beyond Lat. 70° N. Both in Alaska and our then Far West he had difficult times, and in the latter was for weeks

"lost," being finally rescued by Indians. He appears, however, to have left no account of his experiences.

He became associated with the Provident Mutual Life Insurance Co., in Philadelphia, 1897. Appointed general agent in Omaha in 1914; superintendent of western agencies in 1916; soon thereafter appointed superintendent of all agencies, a position in which he continued for the rest of his life.

Member of the Geographical Society of Philadelphia. Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

Home: Philadelphia. Died October 2nd, 1923. (*Provident Notes,* with portrait, October 25th, 1923.)

RICHARD MELANCTHON HURD

(Original member, d. m. 1941)

Born at New York, N. Y.; June 14th, 1865. Son of M. M. and Clara A. (Hatch) Hurd. Married Lucy Gazzam, September 22nd, 1908.

St. Paul's School, Concord, N. H. Yale (A.B., 1888).

President, Lawyers Mortgage Co., New York City, 1903. Author of *Principles of City Land Values*.

Home: Locust, N. J. Died June 6th, 1941. (*Who Was Who; Early American Ascents,* 70; In Memoriam, with portrait, *A. A. J.* iv, 480, by J. M. Thorington.)

With his father and brother spent five summers between 1880 and 1885 in pedestrian tours and climbing, visiting Switzerland, Norway, the Pyrenees, England, Scotland, Wales and Swabia (*A. A. J.* ii, 511). While training at Zermatt they ran up to the Gornergrat in one hour.

1885. Gross Glockner, Monte Cristallo, New Weissthor (Macugnaga to Zermatt), Riffelhorn, Breithorn, Cima di Jazzi, Matterhorn. (R.M.H. was 20 years old in this season and his brother was 16.)

Wrote for *App.*: 'Ascent of the Matterhorn' (iv, 285).

ROSEWELL BIGELOW LAWRENCE

(Original member, d. m. 1921)

Born at Medford, Mass., January 31st, 1856. Educated in public schools. Harvard (A.M., 1878; LL.D., 1881). Unmarried.

Practiced law at Medford, Mass. Trustee, Tufts College, 1906. Recording secretary, Appalachian Mountain Club, 1883-1916; publication committee, 1888-1921.

Home: Medford, Mass. Died November 2nd, 1921. (In Memoriam, with portrait, *App.* xv, 257; Harvard, Class of 1878, 50th anniversary report, 1928.)

1882. Travelled widely through Europe from June until December: Ireland, Scotland, England; crossed Norway and Sweden to Finland and Russia. Visited St. Petersburg, Moscow and Nizhni Novgorod; then down the Volga to Kazan, returning through Denmark, Belgium, Holland, Germany, France, Italy and Switzerland to Paris.

1886. Mt. Katahdin.

1888. Mt. Franklin (El Paso), Mt. Wilson (Pasadena). Made 30-day horseback ride through Yellowstone Park, Bunsen Pk., Electric Pk., Mt. Sheridan, Mt. Washington, Hoodoo Mtn.

1890. Great Smokies. Grandfather Mtn., Roan Mtn., Mt. Mitchell.

1891. Mt. Shasta. Japan: Fujiyama, Asamayama, Nantaisan, Kimpuzan.

1892. Travels in Egypt, Palestine and Italy.

1902. Winter travel in Spain.

1908. Visited Panama Canal.

1909. Scandinavia: Jotunheimen.

1910. Germany and Austria: Nuvolau, Schwarzenstein.

1913. Great Britain: Ben Lomond, Helvellyn.

Hawaii: Haleakala. Also visited the Canadian Rockies, Rainier and Glacier National Parks.

Wrote for *App.*: 'The Giant Stairs' (iii, 284); 'From the Sources of the Connecticut to the Rangeley Lakes' (iv, 105); 'Middlesex Fells' (iv, 119; vi, 322); "Camel's Rump and the Rangeley Lake Mountains' (iv, 294); 'Ktaadn Basin' (iv, 294); 'Improvements on Mt. Ktaadn' (v, 156); 'Bandai-San, Miomote, Matsushima' (vii, 30).

JOSEPH LE CONTE

(Original member, d. m. 1901)

Born at Woodmanston Plantation, Liberty Co., Ga., February 26, 1823. Married Caroline Elizabeth Nisbet, January 14th, 1847. Father of J. N. LeConte (q.v.).

U. of Ga. (Franklin Coll., 1841; A.M., 1845). College of Physicians and Surgeons (M.D., 1845). Harvard (S.B., 1851. U. of Ga. (LL.D., 1879). Princeton (LL.D., 1896).

In 1844 he made a journey to the headwaters of the Mississippi, during the course of which he met Audubon. Practiced medicine in Macon, Ga., 1847-50. In 1850 he went to Harvard and studied with Agassiz for 15 months. In 1851 he became professor of sciences at Oglethorpe U., but resigned after a year to accept a similar position at U. of Ga., where he remained until 1856. In 1857 he accepted the chair of geology at the College of South Carolina.

During the Civil War he served as chemist of the medical laboratory and chemist of the nitre and mining operations in the Confederate service. He moved to California in 1869, acting as professor of geology and natural history, U. of Cal., until 1896.

Vice-president of the Sierra Club, 1892-98. Mt. LeConte, Le Conte Divide and LeConte Falls in the Sierra Nevada, are named for him.

Author of *Religion and Science; Elements of Geology; Sight, or Principles of Monocular and Binocular Vision; Evolution and Its Relation to Religious Thought; A Compendium of Geology for High Schools.*

Home: Berkeley, Cal. Died July 6th, 1901, during a trip with the Sierra Club into the Yosemite. (*Who Was Who; Dict. of Amer. Biogr.; Autobiography* (portrait) 1903; *San Francisco Call,* July 7th, 1901.) We was the oldest of the founding members of the American Alpine Club, and the first to die.

1870. During summer vacation of U. of Cal., he visited Yosemite Valley, Tuolumne Meadows, Mono Lake and Lake Tahoe. Eagle Pk., August.

1871. Geological studies in Oregon, adjacent to Columbia River.

1872. Yosemite Valley and Lake Tahoe.

1873. Continued geological studies in Oregon.

1874. Lake Tahoe, Mt. Tallac (with his son, q.v.).

1875. Yosemite Valley, where he was injured by a runaway horse.

1878. Yosemite Valley, coming by covered wagon from Stockton.

1879. Columbia River and Puget Sound.

1882. Coaching trip from Berkeley to Yosemite Valley.

1883. Family camped near Arrowhead Springs back of San Bernardino.

1885. Made circuit of Mt. Shasta, and visited Klamath and Crater Lakes.

1886, 1887, 1889, 1893, 1894, 1895, 1897 in the Sierra; see F. Soulè, 'Joseph Le Conte in the Sierra' (*S. C. B.* iv, 1).

1900. (Aet. 77.) With his son rode on horseback from Millwood to summit of Kearsarge Pass.

1901. His last summer; eleventh visit to Yosemite Valley.

Wrote: *A Journal of Ramblings through the High Sierras of California,* privately printed, 1875; reprinted in *S. C. B.* iii, 1; and as a special publication of the Sierra Club (portrait), 1930; also, 'My Trip to Kings River Cañon' (*Sunset,* 1900; reprinted in *S. C. B.* iv, 88); 'Rough Notes of a Yosemite Camping Trip' (*Overland,* vi, 414, 493, 624).

JOSEPH NISBET LE CONTE

(Original member, C. 1905-10, V. P. 1911-13)

Born at Oakland, Cal., February 7th, 1870. Son of Joseph (q.v.) and Caroline Elizabeth (Nisbet) Le Conte. Married (1) Helen Marion Gompertz, June 10th, 1901; (2) Adelaide Elizabeth Graham, February 16th, 1929.

U. of Cal. (B.S., 1891; hon. LL.D., 1905). Cornell (M.M.E., 1892). Phi Beta Kappa, Sigma Xi.

Assistant in mechanics, U. of Cal., 1892-95; instructor in mechanical engineering, 1895-1903; assistant professor, 1903-12; professor of engineering mechanics, 1912-30; professor of mechanical engineering, 1930-37; emeritus since 1937.

Member of American Society of Mechanical Engineers.

Charter member of Sierra Club (president, 1915-17, succeeding J. Muir, q.v.; hon. president since 1931). Corresponding member of the Appalachian Mountain Club. Le Conte Cañon and Le Conte Point, in the Sierra Nevada, are named for him.

Author of *Elementary Treatise on Mechanics of Machinery,* 1902; *Hydraulics,* 1926. Wrote for the American Alpine Club: 'The High Sierra of California,' forming the first issue of *Alpina Americana* (1907) under the editorship of C. E. Fay (q.v.).

Home: Carmel, Cal. (*Who's Who.*)

1874. Lake Tahoe, Mt. Tallac (with his father, q.v.).

1889. Mt. Dana (W.); Mt. Lyell (S.).

1890. Mt. Gould (1st ascent; from S.); Mt. Whitney, Mt. Conness.

1891. Mt. Lyell.

1892. Mt. Lyell, Mt. Ritter (N.E.; 2nd ascent; with T. S. Solomons, q.v.), July 24th.

1893. Mt. Clark.

1895. Mt. Brewer (W.), June 10th; Mt. Whitney.

1896. Mt. Bago (1st ascent), July 11th; University Pk. (1st ascent; from S.), July 12th; Mt. Gould (with B. C. Brown, q.v.), July 13th; Mt. Gardiner (1st ascent; from S., with B. C. Brown), July; Grand Sentinel (1st ascent), Goat Mtn. Crest (1st recorded ascent).

1897. Mt. Lyell (N.); Mt. Ritter (N.E.), July 10th.

1898. Red Slate Mtn. (1st ascent), June 22nd; Mt. Goddard (W.); Seven Gables, Red Mtn. (1st ascent), July 12th; Goat Mtn., July 18th. Exploration at base of Mt. Humphreys.

1899. Mt. Brewer (E.); Mt. Tyndall, Mt. Woodworth, Mt. Guyot.

1900. Mt. Bago, July 1st; Mt. Keith (W.), July 6th; Goat Mtn., July 22nd.

1902. Arrow Pk. (E.); Split Mtn. (1st ascent), July 23rd; Observation Pk. (1st ascent); Mt. Brewer (E.); Marion Pk. (1st ascent); Unnamed 11,527′.

1903. Mt. Whitney July 8th; Mt. Williamson (W.), July 10th; with J. S. Hutchinson (q.v.): Marion Pk., July 22nd; Mt. Sill (1st ascent), July 24th; North Palisade (1st ascent; from W.), July 25th.

1904. Mt. Goddard (W.), July 20th.

1905. Mt. Shasta, Mt. Hood, Mt. Rainier (N.). Measured the floor of Nisqually Glacier, July 18th-28th. (v. *Zeitschr. für Gletscherkunde, Bd. I*).

1906. Mt. Pinchot (E.), Mt. Woodworth. Exploded Middle Fork of Kings River.

1907. Mt. Ritter (N.W.).

1908. With J. S. Hutchinson and D. McDuffie: Mt. Mills (1st ascent), July 10th; Mt. Abbot (1st ascent; from W.), July 13th; Muir Pass (with pack-mules), July 18th.

1909. Mt. Brewer (E.); Mt. Keith, August 20th.

1910. University Pk. (W.); Split Mtn. (South Palisade), July 31st.

1911. Seven Gables (with J. S. Hutchinson).

1912. Diving Board (1st ascent; with J. S. Hutchinson).

1913. Mt. King, North Palisade.

1922. Mt. Goddard, Seven Gables.

1923. Quarter Domes (1st ascent).

1925. Marion Pk.

1926. Agassiz Needle, Marion Pk.

1927. Split Mtn., July.

1928. (Aet. 58.) Mt. Thompson (2nd ascent); North Palisade.

Wrote for *App.:* 'Ascent of Mt. Ritter' (vii, 2); for *S. C. B.:* 'Notes on the Kings River and Mt. Whitney Trails' (i, 93); 'The Diamond Hitch' (i, 327); 'The Basin of the South Fork of the San Joaquin River' (ii, 249); 'Among the Sources of the South Fork of Kings River' (iv, 177, 253); 'Table of Elevations of Peaks in the Sierra Nevada Mountains [*sic*] over 12,000 Feet above Sea Level' (iv, 285); 'The Ascent of the North Palisades' (v, 2); 'The Evolution Group of Peaks' (v, 229); 'The Motion of the Nisqually Glacier, Mt. Rainier' (vi, 108); 'Snowfall in the Sierra Nevada' (vi, 310); 'The High Mountain Route between Yosemite and the Kings River Cañon' (vii, 1); 'The Devil's Postpile' (viii, 170); 'The Soda Springs Property in the Tuolumne Meadows' (ix, 36); 'Scrambles about Yosemite' (ix, 126); 'The Sierra Club' (x, 135); 'Record of an Early Exploration of Tenaya Cañon' (x, 276); 'Identification of the Great Peaks of the Southern Sierras' (xi, 244); 'My First Summer in the Kings River Sierra' (xxvi, 9).

GEORGE THOMAS LITTLE

(Original member, d. m. 1915)

Born at Auburn, Me., May 14th, 1857. Son of Edward T. and Lucy Jane (Bliss) Little. A descendant of Josiah Little, at one time associated with the Pejebscot Proprietors who owned the territory which is now Brunswick. Married Lilly T. W. Lane, December 18th, 1884.

Educated in the common and high schools of his birthplace. Bowdoin (A.B., 1877; A.M., 1880; hon. Litt.D., 1894).

Teacher of Latin, Thayer Academy, Braintree, Mass., 1878-

82. Teacher of Latin, Bowdoin, 1882-85; librarian, 1883-. He developed the library from 34,000 to 110,000 volumes. Member of the State Library Commission of Maine, 1899- (chairman, 1899-1902).

He made a collection of almost 150 letters, many of them to C. S. Thompson (q.v.), covering early Canadian mountaineering, 1895-1907, transcripts of which are now in the library of the American Alpine Club.

Mt. Little, in the Canadian Rockies, is named for him.

Author of *Historical Sketch of Bowdoin College, 1794-1894.*

Home: Brunswick, Me. Died August 6th, 1915. (*Who Was Who;* In Memoriam, Bowdoin College Bulletin, June, 1916. His portrait was presented to Bowdoin by the class of 1877 on the occasion of the 40th reunion.)

1877-78. Spent the year following graduation in foreign travel. Ascended Mt. Sinai.

1896. Canadian Rockies and Selkirks: Took part in the attempt on Mt. Lefroy (with C. E. Fay, C. S. Thompson, q.v.), when Philip Abbot lost his life. Ross Pk. (1st ascent); Rogers Pk. (1st ascent; with C. S. Thompson).

1901. Canadian Rockies: Peak 3; Peak 4; Mt. Little (all 1st ascents; with C. S. Thompson, G. M. Weed, q.v.), July 24th.

1911. Canadian Rockies: As there was some doubt as to whether he had actually been on the peak named for him, he returned and ascended Mt. Little, June 16th (*Führerbuch* of E. Feuz, Jr.).

Wrote for *App.:* 'The First Ascent of Rogers Peak' (viii, 209).

JOHN MUIR

(Original member, C. 1902-05, V. P. 1905-07, P. 1908-11, d. m. 1914)

Born in Dunbar, Scotland, April 21st, 1838. Son of Daniel and Anne (Gilrye) Muir. Married Louise Strentzel in 1880.

Educated in Scotland and at U. of Wis. Harvard (hon. A.M., 1896). U. of Wis. (LL.D., 1897). Yale (Litt.D., 1911). U. of Cal. (LL.D., 1913).

Member of the American Academy of Arts and Letters. Fellow, American Association for the Advancement of Science. Member, Washington Academy of Science. Travelled and studied in

Russia, Siberia, Manchuria, India, Australia and New Zealand, 1903-04; in South America, 1911; in Africa, 1911-12.

Discovered the Muir Glacier during his first journey to Alaska, 1879. Visited the Arctic regions in the U. S. steamer *Corwin* (1880), in search of the De Long expedition. Worked for many years in the cause of forest preservation and establishment of natural reservations and parks. The John Muir Trail, Mt. Muir, Muir Pass, Muir Grove and Muir Gorge (Tuolumne Canyon), in the Sierra Nevada, are named for him, as well as Muir Glacier and Mt. Muir, Prince William Sound, Alaska.

Charter member and first president of the Sierra Club, an office which he held for 22 years (1892-1914) until his death. Honorary member of the Mazamas (1894); portrait, v. *Mazama,* i, 92).

He was the guest of honor at a dinner in New York, June, 1911, this being the only occasion on which he met personally with the Club.

Author of *The Mountains of California,* 1894; *Our National Parks,* 1901; *Stickeen, the Story of a Dog,* 1909; *My First Summer in the Sierra,* 1911; *The Yosemite,* 1912; *Story of My Boyhood and Youth,* 1913; *Travels in Alaska,* 1915. Editor of *Picturesque California,* 1888.

Home: Martinez, Cal. Died December 24th, 1914. (*Who Was Who;* portrait, *A. A. J.* iv, facing p. 168; In Memoriam, with portraits and eulogies, *S. C. B.* x; also *Mazama* iv, 76; S. H. Young; *Alaska Days with John Muir,* 1915; W. F. Badè: *Steep Trails,* 1918; *Life and Letters of John Muir,* 1923; L. M. Wolfe: *John of the Mountains,* 1938; *Son of the Wilderness,* 1945.

Through John Muir more than any other man the beauty of the Sierra Nevada became known. His first visit was in 1868, but, as he said: "I have never left my name on any mountain, rock or tree in any wilderness I have explored or passed through." For this reason only a reconstruction can be made of his mountaineering; it would be impossible to make it complete.

1869. Mt. Dana, Mt. Hoffmann, July 26th; Cathedral Pk. (1st ascent), September 7th.

1871. Colby Mtn. (1st ascent), September 21st; Mt. Lyell, October.

1872. Mt. Ritter (1st ascent), October.

1873. Mt. Darwin (1st ascent; *not* Mt. Humphreys); Mt. Keith, Mt. Tyndall; Mt. Langley, October 15th; Mt. Whitney (1st time by direct approach from E.).

1874. Mt. Shasta, November 2nd.

1875. Mt. Shasta, May 1st; Half (South) Dome, November 10th.

1877. San Gabriel Mtns.

1878. Great Basin, Nev.: Mt. Jefferson.

1878-80. Alaskan glaciers.

1880. Cruise of the Corwin.

1888. Mt. Rainier, August.

1889. Yosemite.

1890. Alaskan glaciers (4th journey).

1899. Member of Harriman Alaska expedition, of which E. S. Curtis (q.v.) was photographer.

1903. Tour of Yosemite with T. Roosevelt.

Muir's writing, for which he will be chiefly remembered, in addition to the books cited, are summarized in two papers of *S. C. B.:* J. E. Doran, 'A Bibliography of John Muir' (x, 41); and C. B. Bradley: 'A Reference List of John Muir's Newspaper Articles' (x, 55).

Muir's chief periodical publications were:

'Alaska' (*Amer. Geologist,* xi, 287).

'Alaska Trip' (*Century,* liv, 513).

'Ancient Glaciers of the Sierra' (*California,* ii, 550).

'By-Ways of Yosemite Travel' (*Overland,* xiii, 234).

'Discovery of Glacier Bay' (*Century,* l, 234).

'Endangered Valley' (Hetch-Hetchy) (*Century,* lxxvii, 464).

'Exploration in the Great Tuolumne Cañon' (*Overland,* xi, 139).

'Features of the Proposed Yosemite National Park' (*Century,* xl, 656).

'Flood-storm in the Sierra' (*Overland,* xiv, 489).

'Forest Reservations and National Parks' (*Harper's Weekly,* xli, 563).

'Geologist's Winter Walk' (*Overland,* x, 355).

'Grand Cañon of the Colorado' (*Century,* lxv, 107).

'Hetch-Hetchy Valley' (*Overland,* xi, 42).

'Living Glaciers of California' (*Harper's,* li, 769).

'New Forest Reservation' (*Mining and Sc. Press,* lxxiv, 283).
'New Sequoia Forests of California' (*Harper's,* lvii, 813).
'Rambles of a Botanist' (*Old and New,* v, 767).
'Rival of the Yosemite' (*Harper's,* xliii, 77).
'Sargent's Silva' (*Atlantic,* xcii, 9).
'Snow Banners of the California Alps' (*Harper's,* lv, 162).
'Snow-storm on Mt. Shasta' (*Harper's,* lv, 521).
'Studies in the Sierra' (*Overland,* xii, 393, 489; xiii, 67, 530; xiv, 464).
'Three Adventures in the Yosemite' (*Century,* lxiii, 565).
'Treasures of the Yosemite' (*Century,* xl, 483).
'Tuolumne Yosemite in Danger' (*Outlook,* lxxxvii, 486).
'Twenty Hill Hollow' (*Overland,* ix, 80).
'Wild Sheep of California' (*Overland,* xii, 358).
'Wild Wool' (*Overland,* xiv, 361).
'Yosemite Storm and Floods' (*Outlook,* lxxx, 297).
'Yosemite Valley in Flood' (*Overland,* viii, 347).

Wrote for *S. C. B.:* 'Remarks at a Meeting of the Sierra Club, November 23rd, 1895' (i, 268); 'The Hetch-Hetchy Valley' (vi, 211); 'Galen Clark' (vii, 215); 'Cathedral Peak and the Tuolumne Meadows' (viii, 1); 'Tehipite Valley' (ix, 125); 'Edward Taylor Parsons' (ix, 219); 'Save the Redwoods' (xi, 1); Studies in the Sierra (reprinted from *Overland Monthly,* 1874-75); I. 'Mountain Sculpture' (ix, 225); II. 'Mountain Sculpture, Origin of Yosemite Valleys' (x, 62); III. 'Ancient Glaciers and their Pathways' (x, 184); IV. 'Glacial Denudation' (x, 304); V. 'Post-Glacial Denudation' (x, 414); VI. 'Formation of Soils' (xi, 70); VII. 'Mountain Building' (xi, 181); 'A Talk by John Muir '(xii, 65; New York, June 17th, 1911; notes by Alden Sampson, q.v.); 'Explorations in the Great Tuolumne Cañon' (xii, 65; from *Overland Monthly,* August, 1873); 'The Kings River Valley' (xxvi, 1); 'The Creation of Yosemite National Park' (xxix, 49).

HARRY PEIRCE NICHOLS

(Original member, C. 1902-07, 1908-10, 1920-22, P. 1923-25, C. 1926-28, d. m. 1940)

Born at Salem, Mass., September 3rd, 1850. Son of Charles Saunders and Amanda Ann (Ainsworth) Nichols. Married Alice M. Shepley, June 8th, 1881.

Harvard (A.B., 1871). Andover Theological Seminary (B.D., 1875). Graduated from Phila. Divinity School, 1876. New York U. (D.D., 1904).

Deacon, 1876, priest, 1877, Protestant Episcopal Church. Rector of St. Paul's Church, Brunswick, Me., 1877-83. Assistant, Trinity Church, New Haven, Conn., 1883-92. Rector of St. Mark's, Minneapolis, Minn., 1892-99. Rector of Holy Trinity Church, New York City, from 1899 until his retirement in 1922. Deputy to General Convention, Minneapolis, 1895, 1898; New York City, 1904, 1922, 1925.

Member of the Alpine Club of Canada, Appalachian Mountain and Green Mountain Clubs.

Author of *Bohlen Lectures on the Temporary and the Permanent in New Testament Revelation,* 1905.

Home: North Conway, N. H. Died November 15th, 1940. (*Who Was Who; Early American Ascents,* 79; W. B. Stevens: *Victorious Mountaineer,* a biography, 1943; In Memoriam, with portraits, *A. A. J.* v, 278, by H. Palmer; with portrait, *C. A. J.* xxvii, 227, by F. N. Waterman.)

1893. Selkirks: Mt. Fox (2nd ascent; with C. S. Thompson, q.v., whom he introduced to mountaineering). Nichols' paper on this expedition, 'Back Ranges of the Selkirks' (*App.* vii, 107), did much to draw subsequent climbers to the region.

1896. Mönch, Mönchjoch, Jungfrau, Lötschenlücke, Mont Blanc.

1898. Canadian Rockies: Vulture Col (N. side only; with C. L. Noyes, C. S. Thompson, q.v.); Pipestone and Dolomite Passes, Cirque Pk. (1st ascent; with R. F. Curtis, C. E. Fay, August 4th, C. L. Noyes, C. S. Thompson, G. M. Weed, q.v.)

White Mountains: Early trips over difficult routes: Montalban Ridge, The Carters (1885); Twins, Pemigewasset Wilderness. Mt. Washington (annually until aet. 87).

Wrote for *App.:* 'Giant's Stairs' (vi, 94); 'Matching Stories of the White Mountains' (xviii, 1).

CHARLES LATHROP NOYES

(Original member, resigned 1904)

Born in Ceylon, India, September 11th, 1851. Son of Joseph Thomas and Elizabeth A. (Smith) Noyes. Unmarried.

Came to U. S. in 1864. Yale (B.A., 1875). Student at Union Theological Seminary, 1877-78, and Andover Theological Seminary, 1877-80. Harvard (D.D., 1909).

Ordained in Congregational ministry, 1881. Pastor of Third Church, Jersey City, 1881-82. Winter Hill Church, Somerville, Mass., 1883-. President, Boston Browning Society.

Member of the Appalachian Mountain Club (councilor on exploration).

Mt. Noyes, in the Canadian Rockies, is named for him.

Editor of *Pilgrim Songs,* 1902; *The Pilgrim Hymnal,* 1904; *New Pilgrim Hymnal,* 1912.

Home: Winter Hill, Mass. Died August 8th, 1923. (*Who Was Who; N.E.A.B.,* 20: 272, with portrait.

1897. Canadian Rockies and Selkirks: Dome (1st ascent; with C. E. Fay, q.v., J. R. Vanderlip); Pollux Pk. (1st ascent; same party). Mt. Lefroy (1st ascent; with C. E. Fay, H. C. Parker, C. S. Thompson, q.v., J. R. Vanderlip), August 3rd; Mt. Gordon (1st ascent; with C. E. Fay, H. C. Parker, C. S. Thompson).

1898. Canadian Rockies: Vulture Col (N. side only; with H. P. Nichols, C. S. Thompson, q.v.); Pipestone and Dolomite Passes, Cirque Peak (1st ascent; with R. F. Curtis, C. E. Fay, H. P. Nichols, q.v., G. M. Weed), August 4th; Mt. Balfour (1st ascent; C. S. Thompson, G. M. Weed, q.v.), August 11th.

Wrote for *App.:* 'Mount Balfour and the Waputehk Snowfield' (ix, 20).

HERSCHEL CLIFFORD PARKER

(Original member, C. 1914-6)

Born at Brooklyn, N. Y., July 9th, 1867. Son of Herschel and Hannah (Walker) Parker. On his mother's side a descendant of Hon. Timothy Walker, a member of the first provincial Congress. Married Evelyn Naegele, May 20th, 1911.

Private schools, Brooklyn. Columbia (Ph.B., 1890; fellow, 1890-91). Sigma Xi.

Assistant in physics, Columbia, 1891-93; tutor, 1893-1901; instructor, 1901-03; adjunct professor 1903, and professor until 1911.

Consulting engineer. Methods of electrical measurement, electrical resistances, electrical investigations with very brief intervals

of contact, electrical properties of material at high incandescence, reduction of metallic iridium, formation and electrical properties of helium, precipitation of gold from solutions. Geology.

F. R. S. Member of American Physical Society, American Institute of Electrical Engineers, Society of Mining and Metal Engineers. Fellow, N. Y. Academy of Science and American Association for the Advancement of Science.

Member of the American Geographical Society, Alpine Club of Canada, Explorers Club (past president).

Author of *Systematic Treatise on Electrical Resistances,* 1897.

Home: Los Angeles, Cal. (*Who's Who,* 1911 edit.; *American Men of Science; Parker in America,* 509; *N. E. A. B.* 14:260, with portrait.)

1891. Mont Blanc, Mt. Shasta.

1895. Matterhorn.

1897. Mt. Rainier. Canadian Rockies: Mt. Lefroy (1st ascent; with C. E. Fay, C. L. Noyes, C. S. Thompson, q.v., J. R. Vanderlip), August 3rd; Mt. Gordon (1st ascent; with C. E. Fay, C. L. Noyes, C. S. Thompson), August 8th.

1899. Mt. Hood. Selkirks: Mt. Dawson (Häsler Pk.; 1st ascent; with C. E. Fay, q.v.), June 24th.

1903. Canadian Rockies: Mt. Goodsir (S. tower; 1st ascent; with C. E. Fay, q.v.), July 16th; Mt. Deltaform (1st ascent), September 1st; Mt. Biddle (1st ascent; both with A. S. Eggers, q.v.), September 3rd; Mt. Victoria, Mt. Temple, Mt. Stephen.

1905. Selkirks: Mt. Sir Donald.

1906. Extensive exploration at base of Mt. McKinley (as a member of the expedition of F. A. Cook, q.v., of which B. Browne was also a member). [For the exploratory history of the mountain, see *A. A. J.* ii, 121.]

1907. Mt. Olympus (1st ascent; with B. Browne).

1909. Selkirks: To N. base of Mt. Sir Sandford (with B.S. Comstock, H. Palmer, q.v.). Also in the Spillimacheen Mtns. (Nomenclature of the Purcell Range being indefinite at this time, this probably refers to his ascent of the lower summit of Mt. Nelson, near Windermere.)

1910. Expedition to Mt. McKinley (with B. Browne and M. LaVoy), attaining 10,300 ft. on S.W. ridge. This expedition exposed Cook's false claim to the ascent. (Browne, *The Conquest*

of Mt. McKinley, pp. 71-73; 117-123; the book being dedicated to Parker).

1912. Expedition to Mt. McKinley (with B. Browne, J. H. Cuntz and M. LaVoy), attacking from N. E. and reaching 20,300 ft. on summit ridge, within easy walking distance of the top, which they were prevented from reaching by wind and cold. This broke the altitude record for North America, established by the Duke of the Abruzzi on Mt. St. Elias. The expedition was in the field for more than six months, and during the final effort spent 28 days continuously on ice and snow.

Wrote for *App.:* 'Winter Climbing on Mt. Washington' (x, 19), 'A Day's Trip over the Presidential Range' (xi, 13); for *C. A. J.:* 'The Ascent of Mt. Hungabee' (i, 80); 'The Expedition to Mt. McKinley' (iii, 57); 'Conquering Mt. McKinley' (v, 11; xiii, 32); 'The Expedition to Mt. McKinley' (*Metropolitan Mag.,* December, 1910); for *A.J.:* 'Conquering Mt. McKinley' (*37,* 189).

JOSEPHINE DIEBITSCH PEARY

(Original member)

Born at Washington, D. C., May 22nd, 1863. Daughter of Herman H. and Magdalena A. Diebitsch. Married Robert E. Peary (q.v.), 1888.

Educated in Washington, D. C., and at Spencerian Business College.

Honorary member of the Geographical Society of Philadelphia.

Associate in the Peary expeditions of 1891, 1892, 1893, 1894. Arctic journey, 1897. Leader of Peary Auxiliary expeditions, 1900-01, 1902. She was the first woman to take part in an Arctic expedition. Her daughter, the "Snow baby," was born at Inglefield Gulf, 1893.

Author of *My Arctic Journal,* 1894; *The Snow Baby,* 1901; *Children of the Arctic,* 1903.

Home: Portland, Me. (*Who's Who in the East.*)

ROBERT EDWIN PEARY

(Original member, honorary 1904, d. m. 1920)

Born at Cresson, Pa., May 6th, 1856. Son of Charles N. and Mary (Wiley) Peary. Married Josephine Diebitsch (q.v.), 1888.

Bowdoin (C.E., 1877; Sc.D., 1894; LL.D.). Tufts (LL.D.). Edinburgh (LL.D.).

Entered U. S. Navy as civil engineer (lieutenant), 1881. Assistant engineer, Nicaragua ship canal, 1884-85; in charge of surveys, 1887-88.

1886. Obtained leave of absence for summer excursion to Disco Bay (70° N.) on W. coast of Greenland, from which point he made a journey of 100 miles to the interior and determined the practicability of using the ice-cap as a highway for exploration.

1891-92. Chief of Arctic expedition of Academy of Natural Sciences of Philadelphia to N.E. Greenland, his wife also being a member. Wintered at Inglefield Gulf and in the following spring crossed the ice-cap to the N.E. extremity, establishing the insularity of Greenland. Discovered and named Melville Land and Heilprin Land. (Received the Cullon medal, American Geographical Society; Patron's medal, Royal Geographical Society).

1893. Arctic expedition in which his wife was again included. In the spring of 1894 he again crossed the inland ice of Greenland but accomplished no exploration on the opposite coast. He discovered meteorites at Melville Bay, which were brought to New York in 1895 and 1897.

1898-1902. During this period his work was financed by Morris K. Jesup and the Peary Arctic Club, a four-year plan being arranged. He failed to reach the North Pole, but made an accurate survey of the N. limit of the Greenland continent and demonstrated that beyond it lay a Polar ocean. In 1902 he attained 84°, 17′, 27″ N., the highest latitude reached in the western hemisphere.

He was promoted to the rank of commander and, on his return, elected president of the American Geographical Society. In November, 1903, he went to England on a naval commission and received the Livingstone gold medal of the Royal Scottish Geographical Society.

1905. Sailed from New York, July 16th, on the *Roosevelt*, the first ship built for the purpose of Arctic exploration. Wintered on the coast of Grant Land and started with sledges February 21st, 1906. On April 21st he reached 87°, 6′ N. and returned to N. coast of Greenland. The expedition returned to Labrador in October.

1908. Eighth Arctic expedition. Left Etah in the *Roosevelt*, August 18th, wintered in Grant Land and set forward from Cape Columbia, March 1st, 1909. With his negro servant and four Eski-

mos he attained the North Pole, April 6th. (Thanks of Congress, March 3rd, 1911; medals of Natl. Geogr. Soc., R. G. S., Geogr. Soc. of Phila., etc. Retired with the rank of rear-admiral.)

President, 8th International Geographical Congress, 1904; honorary vice-president of 9th, Geneva, 1908, and 10th, Rome, 1913. Explorers Club (past president). U. S. delegate to International Polar Commission, Rome, 1913. Grand Officer d'Honneur, France, 1913. Honorary member, Geographical Society of Philadelphia.

Author of *Northward Over the Great Ice,* 1898; *Nearest the Pole,* 1907; *The North Pole,* 1910; *Secrets of Polar Travel,* 1917.

Home: Washington, D. C. Died February 20th, 1920. (*Who Was Who; Encyl. Brit.*)

ANNIE SMITH PECK

(Original member, resigned 1912)

Born at Providence, R. I., October 19th, 1850. Daughter of George Bacheler and Ann Power (Smith) Peck. A descendant of Joseph Peck, who settled at Hingham, Mass., in 1638, and, on her mother's side, of Roger Williams. Unmarried.

Stockbridge School, Providence. U. of Mich. (A.B., 1878; A.M., 1881). Studied in Germany, 1884-85, and was the first woman to study at the American School of Classical Studies, Athens, 1885-86.

Specialized in Greek and archeology. Taught in various schools. Professor of Latin, Purdue U. and Smith. Lectured on South America from the tourist and commercial standpoints.

U. S. delegate to International Congress of Alpinism, Paris, 1900. F. R. G. S. Visited South America, 1915, 1916, 1922, 1925, 1929-30. Received the order of Al Merito (Chile) on her 80th birthday.

Author of *A Search for the Apex of America,* 1911; *The South American Tour,* 1914; *Commercial and Industrial South America,* 1922; *Flying over South America,* 1932.

Home: New York City. Died July 18th, 1935. (*Who Was Who; N. E. A. B.* 15:152, with portrait; *Early American Ascents,* 79.)

1888. Mt. Shasta.

1895. Breithorn, Wellenkuppe, Matterhorn, Jungfrau.

1900. Zugspitze (Höllenthal); Gross Glockner, Monte Cristallo, Fünffingerspitze.

1897. With the backing of the *New York World:* Popocatepetl, Orizaba (then the highest elevation attained by a woman).

1903. Peru: El Misti (September).

1904. Bolivia: Mt. Sorata (to 19,000 ft.), August 15th; Mt. Huascaran (to 19,000 ft. on E. side and 18,000 ft. on W. side), September 4th.

1906. Exploration at source of the Amazon (Marañon) River, Peru. To 18,000 ft. on highest peak of Raura Range. Unnamed 16,300 ft. (1st ascent). Made 3d and 4th attempts on Mt. Huascaran, attaining 17,000 ft. and 17,500 ft. on W. side.

1908. N. summit of Mt. Huascaran (21,812 ft.; 1st ascent). This was afterward named Cumbra Ana Peck by the Lima Geographical Society.

Miss Peck estimated, without instrumental readings above 19,600 ft., that the N. peak (lower summit) of Mt. Huascaran was probably 24,000 ft. and the highest in South America. Mrs. Workman (q.v.), believing that Aconcagua held this position, sent a scientific expedition which determined the elevation of the N. peak to be 21,812 ft. and that of the S. peak 22,182 ft. (This was a matter of personal rivalry, since Mrs. Workman, in 1906, had made a new altitude record for women by the ascent of Pinnacle Pk., 23,300 ft., in the Himalayas.)

At the annual meeting of the American Alpine Club, January 2nd, 1909, a committee composed of Profs. Reid, Rotch and Pickering was formed to secure information on Mt. Huascaran, "concerning which exaggerated reports had been circulated in the press." At the meeting of 1910, the committee confirmed the altitudes as determined by the expedition sent by Mrs. Workman.

1911. (Aet. 61.). Two peaks (*ca.* 21,250 ft.; 1st ascents) at the S.E. end of the Coropuna massif (Peru). [Miss Peck's attention had been drawn to this mountain by a statement that it was to be an objective of the Yale Peruvian expedition, led by H. Bingham (*A. A. C.,* 1914). It was then thought, from Bandelier's book, that it might be higher than Aconcagua. She attempted to be first on the ground, and claimed to have reached the top, but the Yale expedition's survey showed that the highest point, 21,703 ft., which Bingham ascended, was the cone at the N.W. end of the massif.]

Wrote: 'A Woman in the Andes' (*Harper's,* cxiv, 3); 'The First Ascent of Huascaran' (*Harper's,* cxviii, 173; also *Bull. A. G. S.,* June, 1909).

EDWARD CHARLES PICKERING

(Original member, C. 1911-15, d. m. 1919)

Born at Boston, Mass., July 19th, 1846. Son of Edward and Charlotte (Hammond) Pickering. Married Lizzie Wadworth, March 9th, 1874.

Boston Latin School. Harvard (S.B., Lawrence Scientific School, 1865; hon. A.M., 1880). LL.D., Univs. of Cal., 1886; Mich., 1887; Chicago, 1901; Harvard, 1903; U. of Pa., 1906. Heidelberg (Ph.D., 1903). Victoria U., England (D.Sc., 1900). Allegheny (L.H.D., 1912).

Instructor in mathematics, Lawrence Scientific School, 1865-67. Thayer professor of physics, Mass. Institute of Technology, 1867-76. Professor of astronomy and director of Harvard Observatory, 1876-.

Established first physical laboratory in the U. S., for the study of light and spectra of stars. Made 1,400,000 measurements with a meridian photometer of his own invention. Established an auxiliary station at Arequipa, Peru, for observation of southern stars, thus extending the work from pole to pole.

Accompanied the Nautical Almanac expedition to observe the total eclipse of the sun, August 7th, 1869. Member of the U. S. Coast Guard expedition to Xeres, Spain, 1870.

Many awards, including medal of the Royal Astronomical Society, 1886, 1901. Knight, German Order pour la mérite, 1911. Member of many European and American societies.

Founder and first president of the Appalachian Mountain Club.

Author of *Elements of Physical Manipulation*. Edited 70 volumes of annals and other publications of Harvard Observatory.

Died February 3rd, 1919. (*Who Was Who;* In Memoriam, with portrait, *App.* xiv, 337.)

Wrote for *App.:* 'Mountain Observatories' (iii, 99); 'Accurate Mountain Heights' (iv, 215); 'Heights of the White Mountains' (iv, 305); 'The Colorado Mountains from the Astronomical Standpoint' (v, 165); 'The Volcanoes of the Azores' (xi, 344).

HARRY FIELDING REID

(Original member, C. 1902-13, V. P. 1914-16, d. m. 1944)

Born at Baltimore, Md., May 18th, 1859. Son of Andrew and Fanny Brooke (Gwathmey) Reid. Married Edith Gittings, November 22nd, 1883.

Johns Hopkins (A.B., 1880; Ph.D., 1885). Pa. Military Academy (C.E., 1886). Studied in Germany and England, 1884-86.

Professor of mathematics, 1886-89, physics, 1889-94, Case School of Science, Cleveland, O. Lecturer, Johns Hopkins, 1894-96, associate professor, 1896-1901, professor of geology and physics, 1901-11, professor of dynamical geology and geography, 1911-30; emeritus 1930-. Chief, highway division, Md. geological survey, 1898-1905. Expert in charge of earthquake records, U. S. Geological Survey, 1902-19.

Member of International Commission on Glaciers. Hon. member, Soc. Helvétique des Sciences. Corresponding member of the Philadelphia Academy of Natural Sciences. Fellow, Geological Society of America and American Physical Society. Member of the National Academy of Sciences, American Philosophical Society, Seismological Society of America (president, 1913), American Geophysics Union (chairman, 1924-26). Member of National Academy of Sciences committee, 1915, to report on possibility of controlling slides in the Panama canal.

Hon. member of the Mazamas. At various times he wrote studies of the Muir (1892-96) and other glaciers. Reid Glacier (Alaska) and Reid Glacier (Mt. Hood) are named for him.

On May 9th, 1901, he attended the gathering at the rooms of the Geographical Society of Philadelphia, at which the American Alpine Club was founded, the preliminary circular sent to prospective adherents being signed by him, E. S. Balch and A. Heilprin (q.v.).

Author of *Highways of Maryland*, 1899-1902.

Home: Baltimore, Md. Died June 18th, 1944. (*Who's Who; Early American Ascents, 79*; In Memoriam, with portrait, *A. A. J.* v, 413, by R. T. Chamberlain; *App.* x (n.s.), 236.

1897. Following attendance at the 7th Geological Congress in Moscow, he joined a party which ascended Little Ararat on September 29th. Shortly thereafter he ascended Mt. Aararat to 15,000 ft. See his note, 'The Accident on Mt. Ararat' (*A. J. 19*, 42).

1901. Mapping of Mt. Adams (which he ascended with C. E. Rusk, q.v., July 31st). Reid Glacier (Mt. Hood) was named for him in this year.

1905. Piz Bernina (traverse); Becco di Mezzodi, Croda da Lago (several routes); Tofana di Roces (S. face); Punta Fiammes, Piz Popena, Grosse Zinne, Kleine Zinne.

1906. Orizaba (with A. P. Coleman, hon. A. A. C., and R. T. Chamberlin).

1911. Norway: Horunger Mtns., including the Störes (traverse), Skagastölstind (guideless).

1912. (Aet. 53.) Aig. des Gds. Charmoz (guideless); Wellenkuppe (guideless).

Wrote for *App.*: 'The Flow of Glaciers and their Stratification' (xi, 1); for *Mazama:* 'Glaciers' (ii, 119); 'Glaciers of Mt. Hood and Mt. Adams' (ii, 195); also, 'Studies of Muir Glacier' (*Natl. Geogr. Mag.,* 1892); 'Glacier Bay and its Glaciers' (*16th Ann. Rept. U. S. G. S.,* 1896); 'Mechanics of Glaciers' (*J. of Geol.,* iv); 'Studies of the Glaciers of Mt. Hood and Mt. Adams' (*Zeitschr. für Gletscherkunde,* Bd. I); 'Variation of Glaciers' (annual reports in *J. of Geol.,* 1895-); 'Studies of Forno Glacier' (*Rept. of Calif. Earthquake Commission,* 1910).

CLAUDE EWING RUSK

(Original member, resigned 1913)

Born in Knox Co., Ill., November 20th, 1871. Son of James A. and Josie A. Rusk. His grandfather was a colonel in the Mexican war and an early settler in Indiana. C. E. R. came with his parents as pioneers in 1873 and settled in a log cabin in eastern Klickitat Co., Washington Territory, near the foot of Mt. Adams. Married Rachel N. Gilmore, October 28th, 1898.

As a school teacher, at the age of 17, he lived at Camas Prairie. Studied law in the office of Brooks and Snover, Glendale, Wash. Admitted to the bar in 1902 and practiced in various parts of the state, living for seven years on Lake Chelan. In 1915 he was appointed Receiver of Public Moneys at Yakima, Wash., holding this position for seven years.

Member of the Mazamas (1905). President of the Cascadians, Yakima, Wash. (1920).

Author of *Tales of a Western Mountaineer: A Record of Mountain Experiences on the Pacific Coast,* 1924; *Timberline Campfires* (an unpublished manuscript, a chapter of which appeared in *A. A. J.* vi, 48).

Home: Grants Pass, Ore. Died 1931, his ashes being placed on top of The Castle, a summit promotory of Mt. Adams. (Portrait, *Pacific Monthly,* xxiv, 255.)

At an unspecified date: Goat Mtn. (1st ascent).

1889. Mt. Baker (with his uncle, W. A. Maxwell, also a teacher and a former resident of Iowa), July 1st; Mt. Baker.

1890. Visited E. (Rusk) glacier of Mt. Adams during a family circuit of the mountain, his mother and sister (aet. 12) being of the party.

1891. Reached subsidiary summit of Mt. Adams at night, July 4th, with his father and others for an illumination, storm preventing their reaching the highest point.

1895. Mt. Adams, July 10th. Met C. H. Sholes (q.v.) on the summit, while the latter was sending heliograph signals to a Mazama party on Mt. Hood.

1897. Mt. Baker, August 19th, with his mother and sister.

1898. Mt. Pit (Mt. McLoughlin).

1901. Mt. Baker, July 31st, with H. F. Reid (q.v.), while the latter was mapping the mountain. Rusk later made another ascent.

1903. Mt. Baker (new route from E.; with G. G. Cantwell, q.v.), September 3rd. Examined glaciers on E. side of Mt. Baker, July-September.

1905. Mt. Rainier (with J. H. Cameron, C. H. Sholes, C. E. Fay, q.v., the latter going only as far as Gibraltar), July 25th-26th.

1906. Glacier Pk., August 26th.

1910. Leader of Mazama expedition to Mt. McKinley. This was financed by the *Pacific Monthly,* Portland *Oregonian,* N. Y. *Herald,* R. L. Glisan and others. The equipping of the expedition was undertaken by C. H. Sholes (q.v.), who, however, was unable to accompany the party. A group of four took the field just behind the Parker-Browne expedition, but inadequate equipment and shortage of food compelled retreat from Ruth Glacier at a point near the base of Mt. McKinley's S. ridge. The Mazamas lacked funds for publication at the time, and no account of the expedition appeared in their journal.

1918. Mt. Adams (from S.), September 6th.

1919. Attempt on Mt. Adams from E., August 16th.

1920. Mt. Stuart, July 4th; also on Labor Day.

1921. Mt. Stuart, May 29th; Mt. Adams (1st ascent of E. face), August 13th-14th; also by the usual route (his 10th ascent), August 10th.

1922. Mt. Stuart, May 29th; Mt. Shasta to within 100 ft. of

summit, July 17th; Mt. Hood (from Cooper Spur; alone), August.

1923. (Aet. 51.) Mt. Shasta, July 29th, rounding out a third of a century of climbing.

Wrote: 'Account of Ascent of Mt. Baker' (Seattle *Post Intelligencer,* September 20th, 1903); 'On the Trail of Dr. Cook' (*Pacific Monthly,* October-November, 1910; January, 1911).

ISRAEL COOK RUSSELL

(Original member C. 1902-06, d. m. 1906)

Born at Garrattsville, N. Y., December 10th, 1852. Son of Barnabas and Louisa (Cook) Russell. Married J. Augusta Olmstead, November 27th, 1886.

New York U. (1872; M.S., C.E., LL.D.). Postgraduate studies at School of Mines, Columbia. U. of Mich. (hon. LL.D.).

Member of the U. S. Transit of Venus expedition (led by G. Davidson, q.v.) to New Zealand and Japan, 1874-75.

Assistant professor of geology, School of Mines, Columbia, 1875-77. Assistant geologist, U. S. Geographical and Geological Survey West of the 100th Meridian, 1878. Geologist, U. S. Geological Survey, 1880-92. Professor of geology, U. of Mich., 1892-.

President of Michigan Academy of Science and of Geological Society of America.

Geological researches in Mono Lake and Mt. Lyell regions, Sierra Nevada, 1881-83. Mt. Russell is named for him.

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

Author of *Lake Lahontan,* 1885; *The Newark System,* 1892; *Glaciers of North America,* 1897; *Volcanoes of North America,* 1897; *Volcanoes of North America,* 1897; *Rivers of North America,* 1898; *A View of the World in 1900—North America.*

Home: Ann Arbor, Mich. Died 1906. (*Who Was Who; Amer. J. Sc.,* November-December, 1906; *App.* xi, 145); *Detroit Free Press,* May 2nd, 1906.)

1883. Mt. Lyell, August 12th.

In 1890 and 1891 he carried out two audacious attempts on Mt. St. Elias, reaching an elevation of 14,500 ft. (August 24th, 1891), when storms compelled retreat. The Duke of the Abruzzi refers to his "tenacious and often rash courage," and to the help which his

explorations had been to the successful party. Russell Col and Glacier and Mt. Russell are named for him. The high point attained was half way between Russell Col and the summit, the route by which the peak was finally reached.

1896. Explored glaciers of Mt. Rainier, traversing the mountain July 23rd-25th, the ascent being made by Winthrop Glacier, a night spent in the crater, the descent by way of Gibraltar. Russell Cliff, on the crest near the summit is named for him, as is also Russell Glacier, near Carbon Glacier. Results were published in *18th Ann. Rept. U. S. G. S.*, 1896-97, and are abstracted, with portrait and biographical sketch in E. S. Meany, *Mount Rainier, A Record of Exploration* (1916), 159.

Recorded but undated ascents are: Glacier Pk. (at an early date, possibly 1st ascent; see *Rusk*, 152); Mt. Stuart (at an early date, but not 1st ascent). He also went to the West Indies to observe Mt. Pelée in eruption.

Wrote: 'Glacier Cornices' (*J. of Geol.*, xi, 783); 'Glaciers of the Three Sister Peaks, Oregon' (*U. S. Geol. Survey Bulletin, No. 252;* 'Existing Glaciers of the U. S.' (*5th Ann. Rept. U. S. G. S.*, 1883-84); 'Quaternary History of Mono Valley, California' (*8th Ann. Rept. U. S. G. S.*, 1886-87); 'The Expedition of the National Geographic Society and the U. S. Geological Survey (1890)' [to Mt. St. Elias] (*Century*, April, 1891); 'Expedition to Mt. St. Elias' *Natl. Geogr. Mag.*, May, 1891); 'Mount Saint Elias Revisited' (*Century*, June, 1892); 'Second Expedition to Mt. St. Elias in 1891' (*13th Ann. Rept. U. S. G. S.*, 1893, pt. 2.)

JOSEPH HENRY SCATTERGOOD

(Original member, C. 1914-16, 1923-25)

Born at Philadelphia, Pa., January 26th, 1877. Son of Thomas and Sarah (Garrett) Scattergood. Married (1) Anna Theodora Morris, June 13th, 1906; (2) Dorothy S. Deane, November 20th, 1937.

Haverford (A.B., 1896). Harvard (A.B., 1897).

With American Pulley Co., 1897-1900. Secretary, American Dyewood Co., 1904-06, and of Sharpless Dyewood Extract Co., 1900-04. Trustee of estates since 1907.

Director, American Dyewood Co., United Dyewood Corp., First National Bank, Provident Mutual Life Insurance Co., Ameri-

can Pulley Co., Phila. Transportation Co., Lehigh Coal & Navigation Co., and Vicksburg Bridge Co. President, Insurance Co., State of Pa., 1924-26. Treasurer, Haverford, 1916-; Bryn Mawr, 1927-. President, Pa. Working Home for Blind Men. Trustee, Hampton Institute. First chief of Friends Reconstruction Unit in France. Member of original Red Cross Commission to France. Assistant commissioner of Indian Affairs, 1929-33.

Member of Academy of Natural Sciences, American Philosophical Society, American Academy of Political and Social Science.

Home: Villa Nova, Pa. (*Who's Who.*)

1900. Canadian Rockies: He was the first climber to visit Ice River Valley. Mt. Mollison (1st ascent). Also, Mt. Stephen, Cathedral Mtn. (attempt).

1901. Canadian Rockies: Mt. Chancellor (attempt; with C. E. Fay, q.v.); Mt. Goodsir (S. tower; attempt with C. E. Fay, reaching a point 150 ft. from summit); Mt. Vaux (1st ascent and traverse; with C. E. Fay), July 16th; Mt. Chancellor (1st ascent; with G. M. Weed, q.v.), July 31st; Mt. Wapta (1st ascent).

1902. Canadian Rockies: Mt. Victoria (N. peak; 1st ascent), August 24th.

1912. Canadian Rockies and Selkirks: Mt. Lefroy. Mt. Sir Donald, Eagle Pk., Mt. Avalanche.

Wrote for *App.:* 'The Beaverfoot Valley and the ascent of Mt. Mollison' (ix, 289); 'Notes on the locations of Mount Vaux and Chancellor Peak' (ix, 376); for *A. A. J.:* 'After Forty Years' (iv, 190).

CHARLES HENRY SHOLES

(Original member, resigned 1910)

Born in Oneida County, N. Y., January 10th, 1853. Son of Lewis Moss and Euphemia (Tyler) Sholes. His ancestors lived in Groton, Conn., and took part in the battle of Groton Heights during the Revolution. His cousin, C. Latham Sholes, was the inventor of the typewriter. Married (1) Emily B. Crandall, 1877; (2) Gertrude Metcalfe, 1917. His second wife became a member of the Mazamas in 1901.

His family took up government land in Iowa in 1857. He became a court reporter at Des Moines, Ia., in 1872. Visited Centen-

nial Exposition, Philadelphia, 1877. In summer of 1886 studied for five weeks at A. Bronson Alcott's Summer School of Philosophy at Concord, Mass. On his way west he made a detour from Detroit to London, Ont., to call on Walt Whitman, who was vacationing there.

Resumed work as a court reporter in Portland, Ore., 1888, establishing a life-long friendship with W. G. Steel (q.v.).

A founder of the Oregon Alpine Club (1887) and a charter member of the Mazamas (president 1896-97; 1903-05; 1906-09). He was one of the first climbers in the N.W. to use a Swiss ice-axe. In 1939 he presented this to the president of the Mazamas and it has since been handed down to successive holders of that office.

Sholes Glacier, on Mt. Pit (Mt. McLoughlin), was named for him in 1896, but the glacier has now vanished. It is perhaps the only instance of the disappearance of a glacier during the active lifetime of the man whose name it bore.

Mt. Sholes, on Ruth Glacier, Mt. McKinley, is named for him.

Author of *Idle Rhymes from Oregon,* 1907; *Three Merry Vagabond,* 1944; *How I got my Education,* 1944.

Home: Los Angeles, Cal. In 1945 (aet. 92) he was the oldest living member of the Mazamas, and in that year wrote much of this notice for the editor.

Recorded but undated ascents are: Mt. St. Helens, Mt. Pit (Mt. McLoughlin).

1894. Mt. Hood, July 19th.

1895. In charge of Mazama expedition to Mt. Adams, July 10th, meeting C. E. Rusk (q.v.) on summit and sending heliograph signals to party on Mt. Hood (*Rusk,* 70).

1901. Mt. Hood (S. side; with A. J. Capron, q.v., and E. W. Young, q.v.), July 17th.

1904. Mt. Shasta, September 1st. (R. L. Glisan was of the party, but Sholes alone reached the summit in storm.)

1905. Mt. Rainier (leader; with C. E. Rusk, q.v.), July 25th-26th. C. E. Fay (q.v., who went only as far as Gibraltar because of an old leg injury) and J. H. Cameron (q.v.) were of the party.

1906. Mt. Baker.

1909. Mt. Baker, August 8th.

1916. Middle Sister, August 12th.
1934. Visited Death Valley.

Wrote (chiefly verse) for *Mazama:* 'Why a Mountaineering Club' (i, 24); 'Going to the Mountains' (i, 85); 'The Mazama Outing of 1896' (i, 239); 'President's Address' (i, 276; ii, 259); 'Mountain Walk' (ii, 191); 'Curious Tree Forms of Mountain Slopes' (ii, 136); 'White Bark Pine' (iii, 30); 'To Mount Shasta' (iv, 10); 'Owl Club at St. Helens' (iv, 73); 'The Mountain's Boast' (v, 61); 'Thirty Years of Outings' (vi, 45); 'Perilous Ascent of St. Helens' (vi, 61); 'Dirge on a Sixpenny Flute' (vii, 92); 'Hobnails and Stardust' (viii, 60); 'Trails' (ix, 140); 'Levels of Enchantment' (x, 191); 'Sunset Storm on Mt. Hood' (xviii, 73); 'The Forest Silence' (xxiv, 18); 'When the Wind Blows' (xxv, 13); 'The First Mazamas' (xxvi, 35); for *S. C. B.:* 'The Water Ouzel' (vi, 244); for *Trail and Timberline:* 'Sentinels of the Snow-Line' (xxxi, 2).

THEODORE SEIXAS SOLOMONS

(Original member, resigned 1913)

Born at San Francisco, Cal., July 20th, 1870. Son of Seixas and Hannah (Marks) Solomons. His ancestors came from Portugal. His great-grandfather, Gershom Mendes Seixas (see *D. A. B.*), was co-founder and regent of Columbia College. Married Yvonne Robinson.

Boys High School, San Francisco. Special courses at U. of Cal.

Successively a law clerk, court stenographer, newspaper reporter (covering the Columbian Exposition in Chicago) and magazine writer. His writing deals chiefly with the Sierra Nevada, the history of its exploration and narratives of his own experience.

First to propose the idea of a crest-parallel trail through the High Sierra. This afterward became the John Muir trail.

Became acquainted with John Muir in 1893. Made the first photographs of the Mt. Ritter area (1892) and Evolution Group (1894). In these seasons he carried out a pioneer reconnaissance of the unexplored High Sierra and, in 1896, presented to the Sierra Club a report on a continuous route from Yosemite to Kings River canyon over which animals could be led. About 30 names by him,

some 17 applied to mountains, are listed in Farquhar's *Place Names.*

A member of the Appalachian Mountain Club (1895; corresponding member, 1908). One of the "Ask Adventure Experts" on the subject of mountain climbing for *Adventure Magazine.*

He was unable to accept an invitation to join the Italian expedition to Mt. St. Elias, but in 1897 joined the Klondike rush in Alaska, though at first with little view toward gold seeking. He explored the mountain backbone of Seward peninsula and other parts of N.W. Alaska. Settling for several years at the Arctic mining camp of Candle, he made observations and photographic studies of snow and ice conditions, expecting to publish them as 'The Forms of Water,' but the data and negatives were lost. Also studies of Alaskan natives, the northern Innoits. In all, ten years were spent in Alaska. In 1911 he returned to California permanently.

Home: Hollywood, Cal.

1892. Mt. Ritter (2nd ascent; with J. N. LeConte, q.v.), July 24th; Mt. Ritter (W.; alone), August 20th. Explored Middle Fork of San Joaquin River.

1894. Tuolumne Canyon, August; Seven Gables, September 20th.

1895. Mt. Goddard, Mt. Wallace (1st ascent), July 16th; Mt. Darwin, August.

1896. Mt. Lyell, Polly Dome (1st ascent), July 16th.

1897. Mt. Hoffmann, Merced Pk., July 29th; Cathedral Pk., August; Mt. Florence (1st ascent), August 4th. Solomons was at this time introducing a party of the U. S. Geological Survey to the High Sierra.

Wrote for *App.:* 'Mt. Goddard and Its Vicinity' (vii, 41); 'The Grand Cañon of the Tuolumne' (viii, 164); 'Explorations in the Sierra Nevada during the Season of 1896' (viii, 240); 'Surface Features of Northern Alaska' (xii, 45; read before A. M. C. in the M. I. T. auditorium); for *S. C. B.:* 'Among the Sources of the San Joaquin' (i, 61); 'A Search for a High Mountain Route from Yosemite to Kings River Cañon' (i, 221); 'An Early Summer Excursion to the Tuolumne Cañon and Mt. Lyell' (ii, 50); 'An Ascent of Cathedral Peak' (iii, 236); 'After Forty Years' (xviii,

20); also, for *Overland:* 'Unexplored Regions of the High Sierra' (June, August, November, 1896; January, August, 1897); for *Traveler:* 'Grand Cañon of the Tuolumne' (December, 1894); 'In a Crevasse of the Lyell Glacier' (May, 1895; fiction); 'An Enchanted Gorge' (November, 1895); 'Tehipite Valley, (May, 1896).

WILLIAM GLADSTONE STEEL

(Original member, resigned 1923)

Born at Portland, Ore., September 7th, 1854. A relative of the English prime minister, Gladstone. Second cousin of W. S. Ladd (A. A. C., 1914).

Post-office employee; printing and publishing; real-estate and writing.

Founder of the Oregon Alpine Club (1887). Founder and first president (1894-96, 1898-99) of the Mazamas. To him belongs the credit of making an ascent of a glacier-clad peak a prerequisite of membership in the club. Charter member of the Seattle Mountaineers, which was "auxiliary to the Mazamas" when first organized. Fellow, American Geographical Society.

Mountaineering enthusiasts visiting Portland used to be told to "Go and see Will Steel; he knows all about mountains, he all but made 'em."

Early in life he became interested in Crater Lake, was a member of the party that made the first survey, and devoted much time toward making it a national park. He later became superintendent of Crater Lake National Park.

The Oregon Alpine Club organized one of the earliest expeditions into the Olympics and induced the U. S. Army to take part in it. The 14th Infantry regiment was then quartered at Vancouver Barracks, Washington, the party consisting of Lt. (later Gen.) J. P. O'Neil, three sergeants, seven privates and others. Steel himself apparently was not of the party, but the Mazamas have his longhand report (491 pages) of the expedition.

Just before his death he completed the compilation of 58,000 place names in the U. S., with their origin and significance.

Author of *The Mountains of Oregon,* 1890; *Steel Points* (a magazine, 1906-07) and *Steel Points, Jr.* (1925-). The issues of January, April, July, 1907, described Crater Lake, Mt. Hood

and the Olympics, Cascade Forest Reserve, Mt. Hood in Eruption (1865).

Home: Portland, Ore. Died October 21st, 1934. (In Memoriam, with portrait, *Mazama* xvi, 25, by C. H. Sholes.)

Many ascents in the '80s, of which there is no record. Other ascents are: Mt. St. Helens, Mt. Sahale, Mt. Jefferson, Mt. Pit (Mt. McLoughlin). Mt. Hood, (25 times, two of them being July 19th, 1894 and August 1st, 1904); Mt. Adams (twice, one being on July 11th, 1895); Mt. Rainier (July 27th, 1897).

Wrote for *Mazama:* 'Preliminary History of Mazamas' (i, 3); 'Mt. Hood Outing of 1901' (ii, 148).

CHARLES SPROULL THOMPSON

(Original member, resigned 1904)

Born at New York, N. Y., October 29th, 1869. Son of Humphrey Purinton and Anne Stagg (Sproull) Thompson. His ancestors settled at Brunswick, Me., in 1736. Married Reed Gage Frost, April 20th, 1901.

Phillips Academy, Andover. Harvard (1887). Chicago U. (A.M., 1904).

Freight agent of Illinois Central Railroad, 1900; appointed commercial agent of same railroad at Dallas, Texas; commercial agent at Milwaukee, 1906; general agent in charge of offices at St. Paul and Minneapolis, 1912.

When the railroads went into government hands in 1917, Thompson retired. Although not in vigorous health, he went to France in 1918 as a Y. M. C. A. secretary. After his return, he was appointed to lecture for the Red Cross in the Northwest, to create interest in welfare activities.

Introduced to Canadian mountaineering by H. P. Nichols (q.v.). The American Alpine Club has a large series of letters to and from him relating to early climbs, which were preserved by G. T. Little (q.v.). Mt. Thompson and Thompson Pass, in the Canadian Rockies, are named for him. Member of the Alpine Club (London) and Appalachian Mountain Club.

Home: Minneapolis. Died at his brother's home, Bangor, Me., January 30th, 1921. (Harvard, Class of 1887, 7th report,

1912; two portraits, facing p. 210; see also fiftieth anniversary report, 1937.

1893. Selkirks: Mt. Fox (2nd ascent, guideless; with H. P. Nichols, q.v.).

1895. Canadian Rockies and Selkirks: Castor Pk., Rampart (both 1st ascents; with C. E. Fay, q.v.). Mt. Hector (1st ascent; with C. E. Fay).

1896. Canadian Rockies and Selkirks: Rogers Pk. (1st ascent; with G. T. Little, q.v.). Attempt on Mt. Lefroy (with C. E. Fay, G. T. Little, Philip Abbot losing his life on this occasion).

1897. Canadian Rockies: Mt. Lefroy (1st ascent; with C. E. Fay, H. C. Parker, q.v., J. R. Vanderlip), August 3rd; Mt. Gordon (1st ascent; with C. E. Fay, C. L. Noyes, q.v., H. C. Parker), August 10th.

1898. Canadian Rockies: Pipestone and Dolomite Passes, Cirque Pk. (1st ascent; with R. F. Curtis, C. E. Fay, H. P. Nichols, C. L. Noyes, G. M. Weed, q.v.), August 4th; Vulture Col (N. side only; with H. P. Nichols, C. L. Noyes); Mt. Balfour (1st ascent; with C. L. Noyes, G. M. Weed), August 11th.

1900. Canadian Rockies: Was first white man to ascend Alexandra River and reach Thompson Pass, while attempting to connect with J. N. Collie's party on Bush River.

1901. Canadian Rockies: Attempt on Mt. Hungabee (from Paradise Valley; with G. M. Weed, q.v.); Mt. Temple, Mt. Stephen. Eiffel Pk. (1st ascent; same party); Peak 3, Peak 4, Mt. Little (all 1st ascents; with G. T. Little, G. M. Weed), July 24th.

1903. Canadian Rockies: Mt. Bident (1st ascent), August 7th.

1908. Camped in Mexico (Sierra Madre, between Chihuahua and the Pacific).

1910. Crossed Guatemala.

Wrote for *A. J.*: 'The First Ascent of Mt. Quadra' (Bident) (*22*, 205); for *App.*: 'Mount Castor and the Asulkan Ridge' (viii, 17); 'In the Couloir on Mount Lefroy' (viii, 121); 'An Ascent of Ross Peak' (viii, 217; 279); 'At the Headwaters of the Bow' (viii, 320); 'A New Pass at the Head of the West Branch of the Saskatchewan River' (ix, 372); 'Climbs from the Valley of the Ten Peaks' (x, 88); for *S. C. B.*: 'The Taking of Mt. Balfour (ii, 263).

GEORGE VAUX, JR.

(Original member, T. 1908-11, d. m. 1927)

Born at Philadelphia, Pa., December 18th, 1863. Son of George and Sarah (Morris) Vaux. Brother of William S. Vaux, Jr. (q.v.) and Mary Vaux Walcott (q.v.). Married Mary W. James, April 2nd, 1907.

Haverford (B.S., 1884). U. of Pa. (LL.B., 1888).

Admitted to the bar, but was largely engaged in reformatory and penological work, including the Philadelphia House of Refuge. Inspector, State Penitentiary, Eastern Dist. of Pa., 1898-1905. Member of U. S. Board of Indian Commissioners, 1906-27 (chairman). President, Philadelphia Mineralogical Society.

Present at the initial meeting at Philadelphia, May 9th, 1901, when the American Alpine Club was organized.

An original member of the Alpine Club of Canada. Made contributions to the Proceedings of the Academy of Natural Sciences, Philadelphia, subsequently incorporating original researches on glaciers of British Columbia. During the period 1872-1908 he, with his brother and sister, made studies of Canadian glaciers, particularly the Illecillewaet and Asulkan. Vaux Glacier, on Mt. Sir Donald, is named for him.

Home: Bryn Mawr, Pa. Died October 24th, 1927. (*Who Was Who.*)

1900. Canadian Rockies and Selkirks: Mt. Stephen, Abbot Pass (both with M. V. Walcott, q.v.). Mt. Sir Donald (first American ascent; new route on S.W. face, to right of westerly couloir).

1910. Canadian Rockies: Attended A. C. C. camp at Consolation Valley.

Wrote for *App.:* 'The Wapta Fall' (ix, 314); with W. S. Vaux, Jr., 'The Great Glacier of the Illecillewaet' (ix, 156); 'Ascents of Sir Donald in 1900' (ix, 371); for *C. A. J.:* 'Observations of Glaciers in 1909' (ii, No. 2, 126).

WILLIAM S. VAUX, JR.

(Original member, T. 1902-08, d. m. 1908)

Born at Philadelphia, Pa., April 1st, 1872. Son of George and Sarah (Morris) Vaux. Brother of George Vaux, Jr. (q.v.) and Mary Vaux Walcott (q.v.). Unmarried.

Haverford (B.S. in engineering, 1893). An architect, specializing in materials and construction design.

First treasurer of the American Alpine Club. An early member of the Alpine Club of Canada. His first visit to the Canadian mountains was in 1887, then in 1894, with but one season's intermission thereafter until 1907. In 1899, with the assistance of his brother, he made a survey of the forefoot of the Illecillewaet Glacier, laid out a line of plates to measure its recession and located rocks previously marked by other observers. He did similar work on the Asulkan Glacier, and, in the Rockies, on the Victoria, Wenkchemna, Bow and Yoho Glaciers. A little popular treatise, issued each year by the Canadian Pacific Railway, was largely from his pen.

All of the Vauxes were expert photographers and in 1887 the first photos of the Illecillewaet Glacier were made, and annually during the period 1898-1922, one or the other measured the Illecillewaet Glacier. Their measurements of the Yoho Glacier were eventually continued by the Alpine Club of Canada.

Home: Bryn Mawr, Pa. Died July 3rd, 1908. (In Memoriam with portrait, *C. A. J.* ii, No. 2, 124, by G. Vaux, Jr.).

1885. Visited Yellowstone Park. His recorded ascents in the Canadian Rockies and Selkirks (after 1894) are: Mt. Stephen, Mt. Sir Donald.

Wrote for *C. A. J.:* 'Modern Glaciers' (ii, No. 2, 56; reprinted from *Proc. Engineers Club of Phila.,* xxiv); with G. Vaux, Jr., 'Glacier Observations' (i, 149); also, 'Observations made in 1906 on glaciers in Alberta and British Columbia' (*Proc. Acad. Nat. Sc. Phila.,* December, 1906).

GEORGE MARSTON WEED

(Original member)

Born at Bangor, Me., September 14th, 1864. Son of Alonzo Shaw and Esther Ann (Marston) Weed. Married Lilla (Atwater) Calhoun, July 18th, 1903.

Harvard (1886). Boston U. (LL.B., 1889).

Admitted to Massachusetts bar, 1890. In partnership with his brother in the firm of Brewer, Weed and Weed. Master in Chancery for Middlesex Co., 1900.

Member of the Appalachian Mountain Club. Mt. Weed, in the Canadian Rockies, is named for him.

Home: Concord, Mass. (Harvard, Class of 1886, 7th report, 1911.)

1898. Canadian Rockies: Pipestone and Dolomite Passes, Cirque Pk. (1st ascent; with R. F. Curtis, C. E. Fay, H. P. Nichols, C. L. Noyes, C. S. Thompson, q.v.), August 4th; Mt. Balfour (1st ascent; with C. L. Noyes, C. S. Thompson), August 11th.

1901. Canadian Rockies: Mt. Hungabee (attempt from Paradise Valley; with C. S. Thompson); Mt. Temple, Mt. Stephen, Eiffel Pk. (1st ascent; same party); Peak Three, Peak Four, Mt. Little (all 1st ascents; with G. E. Little, q.v., C. S. Thompson), July 24th; Mt. Chancellor (1st ascent; with J. H. Scattergood, q.v.), July 30th.

1902. Canadian Rockies: As a member of J. N. Collie's party, he was the first American to make important new ascents along the North Saskatchewan. Mt. Murchison (1st ascent), July 29th; Mt. Freshfield (1st ascent), August 4th; Mt. Forbes (1st ascent), August 10th; Howse Pk. (1st ascent), August 14th; Mt. Neptuak (1st ascent), September 2nd.

1929. Canadian Rockies: Mt. Victoria (S.).

1930. (Aet. 66.) Canadian Rockies: With his brother rode from Lake Louise to A. C. C. camp at Maligne Lake, on the way making a guideless attempt on the then unclimbed Mt. Weed.

Wrote for *App.*: 'The Pipestone Creek and a New Pass to the upper Bow' (ix, 10).

WALTER DWIGHT WILCOX

(Original member, resigned prior to 1905; reelected 1919, S. 1920-25)

Born at Chicago, Ill., September 24th, 1869. Son of Sextus Newell and Sarah (Adams) Wilcox. A descendant on his mother's side of the Braintree Adamses and of Lord Jones ap Adam of Wales (15th cent.), the latter family changing its name to Adams on moving to England. Married Nanna Lawson, November 27th, 1901.

Racine College grammar school and Phillips Academy, Andover. Yale (1893). Columbia U.

With General Morgan War Trade Bureau, Cuba, 1918-19.

Flour distributor for Cuba during World War I. In business connected with Cuban timber lands.

Honorary member of Alpine Club of Canada. Past president, Trail Riders of Canada. F. R. G. S. Photographer, National Park Service.

Wilcox Pass and Peak, in the Canadian Rockies, are named for him.

Author of *Guide to the Lake Louise District,* 1909; *Picturesque Landscapes of the Canadian Rockies; Camping in the Canadian Rockies,* 1896; *The Rockies of Canada,* 1900; *Caoba, the Mahogany Tree* (a tale of the woods), 1924.

Home: Chevy Chase, Md. (*Who's Who in the East.*)

During the course of a world tour travelled in the Cascades, Alps, Pyrenees, Japan, Ceylon, Hawaii.

1890. Mt. Hood.

1893. Selkirks: Eagle Peak (1st ascent).

1894. Canadian Rockies: Mitre Pass (1st crossing); Mt. Aberdeen (1st ascent), August 17th; Mt. Temple (1st ascent), August 18th.

1895. Canadian Rockies: Observation Peak (1st ascent); circuit of Mt. Assiniboine.

1896. Canadian Rockies: Bow Peak (1st ascent); Sunwapta and Wilcox Passes to Fortress Lake (first white man to follow this route).

1899. Canadian Rockies: Mt. Niblock (1st ascent).

1900. National Geographic Society delegate (with A. Heilprin, q.v.) to Geographical Congress of Paris Exposition.

1901. Canadian Rockies: Attempt on Mt. Assiniboine (reached 11,000 ft., with H. Bryant, q.v.), July 30th; same party also visited the then unmapped area S. of Kananaskis Lakes.

1902. Canadian Rockies and Selkirks: Dolomite Pass. Mt. Cheops.

1923. Canadian Rockies: Mt. Baker (1st ascent).

1940. (Aet. 71.) Canadian Rockies: Revisited Wilcox Pass.

Wrote for *A. A. J.:* 'The Dam at Moraine Lake' (i, 189); 'Early Days in the Canadian Rockies' (iv, 177); for *B. G. S. P.:* 'Weighing the Mountains' (xviii, 26); 'The Valley of the Hidden Lakes' (xx, 61; reprinted in *C. A. J.* xiii, 179); 'Rambles and Mountain Climbs in Various Parts of the World' (vi, 27); for *C. A. J.:*

'An Early Attempt to Climb Mt. Assiniboine' (ii, No. 1, 10); 'First Ascent of Mt. Temple' (xxix, 11); for *G. J.*: 'Lake Louise in the Canadian Rocky Mountains' (vii, 49); also, 'A Type of Lake Formation in the Canadian Rocky Mountains,' with contour map of Lake Louise based on 137 soundings (*J. of Geol.* April-May, 1899); 'Sources of the Saskatchewan' (*Natl. Geogr. Mag.*, April, 1899); 'Recent Exploration in the Canadian Rocky Mountains' (*Natl. Geogr. Mag.*, May-June, 1902).

FANNY BULLOCK WORKMAN

(Original member, honorary 1914, d. m. 1925)

Born at Worcester, Mass., January 8th, 1859. Daughter of Governor Alexander Hamilton and Elvira (Hazard) Bullock. Married William Hunter Workman (q.v.), June 16th, 1881.

Educated in France, Germany and New York.

Officier de l'Instruction Publique (France), 1904. Italian Golden Eagle, 1904. Gold medalist, French Alpine Club, 1904. Hon. member of the Soc. de Géographie (Nancy). Corresponding member of the Appalachian Mountain Club and of the Brooklyn Institute of Sciences and Arts.

Author (with W.H.W.) of *Algerian Memories; Sketches a-Wheel in Modern Iberia; Through Town and Jungles; In the Ice World of Himalaya,* 1900; *Ice-Bound Heights of Mustagh,* 1908; *Peaks and Glaciers of Nun Kun,* 1909; *The Call of the Snowy Hispar,* 1910; *Two Summers in the Ice Wilds of the Eastern Karakoram,* 1917.

After an illness of eight years, died at Cannes, January 22nd, 1925. (*Who Was Who; Early American Ascents,* 80; In Memoriam, with portrait, *App.* xvi, 186, by W. H. Workman.)

During several seasons in the '90s: Mont Blanc, Matterhorn, Allalinhorn, Breithorn, Wellenkuppe, Zinal Rothhorn; also peaks in Tyrol, including Wildspitze.

1898. Preliminary journey in Kashmir to Ladakh and the border of Turkestan, crossing three snow passes over 17,500 ft.

1899. Ascended the Biafo Glacier and Hispar Pass (17,500 ft.). First ascents of Siegfriedhorn (18,600 ft.).; Mt. Bullock Workman (19,450 ft.); Mt. Koser Gunge (21,000 ft.)

1902. Explored the 30-mile Chogo Lungma Glacier to its source (19,000 ft.) and three of its tributaries. Bhayakara Col

(19,262 ft.; 1st ascent). First traverse of the Chogo Lungma Riffelhorn (15,337 ft.); first ascents of Cornice and Practise Pks. (17,814 ft. and 16,000 ft.).

1903. Explored Hoh Lumba and Sosbon Glaciers. Col des Aiguilles (18,331 ft.). First ascents of Mt. Chogo (21,500 ft.); Mt. Lungma (22,568 ft.). Explored Bolucho Glacier and crossed Bolucho Col (17,000 ft.) to Kero Glacier. Explored Alchiori Glacier to its source (17,622 ft.).

1906. Complete circuit of the Nun Kun, with first ascents of Pinnacle Pk. (23,300 ft.; at that time an altitude record for women); Mt. Nieves Penitentes (19,080 ft.); D41 (20,571 ft.).

1908. Explored the 36-mile Hispar Glacier, crossing Hispar Pass and descending Biafo Glacier into Baltistan, a total ice journey of 74 miles. Biafo-Hispar watershed peak (21,350 ft.; 1st ascent).

1911. Crossed Saltoro Pass (18,000 ft.) and descended to Siachen Glacier, the longest in Asia (50 miles). First ascent of snow peak (21,000 ft.).

1912. Explored and surveyed Rose Glacier (50 miles), with first ascents of seven peaks between 19,000 and 21,000 ft.

(Scientific papers relating to the foregoing were published in the Geographical Journal, Scottish Geographical Mag., Alpine Journal and Appalachia. Also in the Bulletins of the Soc. de Géographie (Paris, Nancy, Lille, Rouen), Revue Alpine Lyon and La Nature. Also in the Bulletins of the Vienna and Frankfort Geographical Societies and D.O.A.V. Mitteilungen.)

Wrote for *A. J.*: 'Two Pioneer Ascensions in Baltistan' (*20*, 3; also in *App.* IX, 277); 'First Ascent of Mt. Koser Gunge' (*20*, 11); for *App.*: 'The Ascent of the great Chogo Lungma Glacier' (x, 241); for *C. A. J.*: 'The Altitude of Mt. Huascaran' (ii, No. 2, 97).

WILLIAM HUNTER WORKMAN

(Original member, honorary 1914, d. m. 1937)

Born at Worcester, Mass., February 16th, 1847. Married Fanny Bullock (q.v.), June 16th, 1881.

Yale (1869). Harvard (M.D., 1873). Postgraduate studies in Vienna, Heidelberg and Munich.

Practiced surgery at Worcester, Mass., from 1875 to 1889, after which ill health forced his retirement.

In 1892 he and his wife began a series of journeys by bicycle

which, in the next seven years, caried them over much of Europe, into North Africa, Palestine, Syria and Turkey. During 1897-99 they also covered by bicycle 1800 miles in Ceylon, 1500 miles in Java, and 14,000 miles through the length and breadth of India. They also visited the temples of Angkor in Siam. All of this was with the purpose of studying the people, their architecture and art.

Member of the Alpine Club (London). Corresponding member of the Appalachian Mountain Club.

For joint authorship, see Fanny Bullock Workman.

Home: Newton, Mass. Died October 7th, 1937. (*N. E. A. B.* Suppl. C, 541, with portrait; *Early American Ascents,* 80; In Memoriam, with portrait, *A. A. J.* iii, 207, and *A. J. 50,* 290, by H. S. Hall, Jr.; *App.* xxi, 524.)

1899, 1902. See F.B.W.

1903. See F.B.W. (Aet. 56.) Ascended cone of Pyramid Pk. to 23,394 ft.

1906. See F.B.W. (Aet. 59.) Reached 22,720 ft. on Pinnacle Pk.

1908, 1911, 1912. See F.B.W.

Wrote for *A. J.:* 'Ascent of the Bhayakara La' (*22,* 16); 'Some Obstacles in Himalayan Mountaineering and History of a Record Ascent' (*22,* 489); 'Altitude Measurements by Mountaineers' (*23,* 30); 'Nieves Penitentes in Himalaya' (*29,* 139); 'The Mountaineering Aspect of Himalayan Glaciers' (*29,* 284; also in *Zeitschr. für Gletscherkunde,* July, 1907); for *G. J.:* 'From Srinagar to the Sources of the Chogo Lungma Glacier' (xxv, 245); 'An Exploration of the Nun Kun Mountain Group and its Glaciers' (xxxi, 12); for *App.:* 'High Pioneer Ascents in Baltistan' (x, 383); 'Some Altitude Effects at Camps above 20,000 ft.' (xi, 350; read at Phila. meeting of A. A. C., December 30th, 1907); 'The First Circuit of the Nun Kun' (xii, 101); also, 'The Moraine Formations of the Great Chogo Lungma Glacier' (VIII Int. Geogr. Cong., N. Y., September 13th, 1904).

E. WELDON YOUNG

(Original member, resigned 1904)

Born at Koniska, Minn., July 9th, 1869. Son of Thomas Miles and Marian (Holmes) Young. Married Hazel Maydwell, April 16th, 1904.

U. of Minn., College of Homeopathic Medicine and Surgery (M.D., 1889). Postgraduate work in New York, London, Berlin and Vienna.

Surgeon. Past-president, Public Health League of Washington. Fellow, American College of Surgeons. Past-president, Washington State Homeopathic Medical Society. Chief of staff, Minor Hospital, 1925-29, and of Maynor Hospital, Seattle. Past-president, Sons of American Revolution.

First vice-president of the Mazamas (1898-99), and held other offices 1897-1904. Member of the Mountaineers.

Home: Seattle, Wash. Died May 9th, 1940. (*Who's Who Among Physicians and Surgeons.*)

At an unspecified time he ascended Mt. Sahale.

1897. Mt. Rainier (assistant leader of Mazamas under E. S. Curtis, q.v.), July 27th.

1898. Mt. St. Helens (assistant leader of Mazamas), July 21st.

1901. Mt. Hood (S. side; with A. J. Capron, q.v., C. H. Sholes, q.v.), July 17th.

PROCEEDINGS OF THE CLUB

SECRETARY'S ANNUAL REPORT

Year 1945 (November 10, 1944 to October 31, 1945)

Again our membership has shown a slight gain. Six Active members have died: Charles F. Hogeboom, Mrs. Robert L. O'Brien, 1st Lt. John A. McCown II (in action in Italy), Arthur O. Wheeler, Andrew M. Taylor, Frederic K. Butters, and our Honorary member, Thomas Riggs. Twelve Active members have been elected. There are thus at the end of the club year 9 Honorary and 294 Active members, a total of 302 (as one is carried as both). Approximately one-half the members are under forty-five years of age. About 110 members have been in active service with the armed forces, of whom something over 50 were at one time or another concerned with mountain and cold climate warfare, and about 30 altogether were in the 10th Mountain Division.

Three meetings of the Board of Directors have been held: on November 25, 1944, May 12 and September 29, 1945. More frequent meetings would be held were it not for the considerable travel involved. No meetings other than the Annual Meeting and Dinner were held during the year.

The 17th issue of the Journal, the 12th under Dr. Thorington's editorship, appeared in late January.

A work of fiction, *White Tower,* by our member James Ramsey Ullman, appeared in September as the Book-of-the-Month-Club's selection.

Bibliographies of journal articles, covering ascents in five mountain regions in North and South America, by Joel E. Fisher, were prepared, privately printed and circulated by him during the summer. The regions covered are: Canada, Alaska and Pacific Coast States; United States (except Pacific Coast and Eastern Seaboard); Eastern Seaboard; Mexico, Central and South America. The five are bound as separate pamphlets, and the author will supply any or all to members who request them from him and who are willing to check the references.

Several members in the 10th Mountain Division have done a little climbing on leave since the cessation of hostilities, in the Austrian, Swiss, Italian and Yugoslavian Alps. One new member, Major Link, reported a first ascent (Corno Piccolo) and a

new route on the Gran Sasso in Italy in 1944, during a training course of which he was the commanding officer. B. Washburn and N. Bright pitched camp on an unnamed 14,000-ft. summit just E. of Mt. McKinley for several weeks last spring in the course of testing equipment for the Army Air Forces. A small detachment from Belmore Browne's Arctic Training School for the Army Air Forces, led by Capt. B. F. Thompson, gained experience on the glaciers and peaks near Sunwapta Pass, Canadian Rockies, in August. Kauffman with his wife and several others, including Harvard M. C. members with them part of the time, made a number of ascents and traverses in the Selkirks S. of Glacier involving some back-packing. Several members attended the Canadian A. C. camp in Eremite Valley, S. of Jasper.

Henry S. Hall, Jr.,
Secretary

ANNUAL MEETING

The 43rd Annual Meeting of the Club was held at the Cosmopolitan Club, 122 East 66th Street, New York, on Saturday, December 1, 1945, at 2.15 p.m. President Case presided. There were 26 members present as the meeting was called to order, and 37 at the end, and the attendance increased to about 70 for the speaking program afterwards.

The reading of the Minutes of the previous Annual Meeting which had been published in the 1945 Journal was by vote omitted.

The Secretary read his Annual Report which was by vote approved.

The Treasurer's Annual Report, having been circulated in printed form to all members, was after explanation of some items in reply to questions, voted approved. Case briefly mentioned the now investments of the capital funds.

The Secretary read Miss Buck's Librarian's Annual Report which was voted approved (here published). D. W. Brown spoke of prompt replies received from the Librarian to his inquiries.

Nominations for Councilors approved by the Directors were read by Gilman as follows:

Councilors for 1946-1948:
Lt. Comdr. Charles S. Houston, M.C., U.S.N.R.
H. Bradford Washburn, Jr.
Major Walter A. Wood, A.C.

Councilor for year 1946, in place of J. H. Carlson, resigned because of inability to attend meetings:
Lt. (j.g.) Maynard M. Miller, U.S.N.R.

These were then elected, following which Wood made the routine motion, and it was seconded and carried, that the officers and other councilors be continued, as previously elected, for the ensuing year.

The Secretary referred to letters from several members expressing regret at their absence, including those from J. W. A. Hickson, Miss Evelyn Runnette, and a wire from H. E. Sampson, recently elected Honorary President of the Alpine Club of Canada.

The complicated matter of channeling surplus Army mountain and cold climate equipment to those most interested in its use was referred to by Case, House and Wood, the latter bespeaking the help of other members on this. Legal complications and divergent opinions in Washington are the chief difficulty, while some equipment finds its way by devious means into dealers' hands.

Fisher referred to the Research Fund. There would be a collection of funds soon. Several projects were being considered.

Mrs. Cowles who had come from Colorado Springs for the meeting spoke briefly of the attractions there, the mountains and the mountain enthusiasts, assuring Eastern members a warm welcome whenever they might be able to go out there.

Case made a general statement of Club policy and problems and plans for the post-war years. He referred to Thorington's resignation as Editor of the Journal after thirteen years, and of the appointment of Robert H. Bates and David Allan Robertson, Jr., to succeed him after the appearance of the 1916 Journal. Oscar Houston moved a vote of thanks to Thorington, referring particularly to his contributions of historical matter in almost every issue, and this was seconded by Donald Brown, and carried with applause.

Case spoke of possible expeditions by members in the near future, and referred to a recent exchange of letters between him and the Rt. Hon. L. S. Amery, president of the Alpine Club (London) regarding possible cooperation in future Himalayan expeditions. Comments were made by Bates and others.

Donald Brown and Roger Wolcott brought up the old question of the club conducting some sort of summer camp. Miss Gest suggested that we might cooperate as a group occasionally with other

clubs' camps instead of attending merely as individuals. McInnes, Wood, Hall and others made comments. Hall said that this general question had come up before with never any positive action. He expressed the opinion that we are a club largely of leaders and individualists, perhaps preferring to run our own small parties rather than to move together as larger groups. Said he would be glad to continue as he had in the past, helping to bring like-minded members in touch whenever possible. The matter was left unsettled but obviously needing further consideration. Case said he would appoint a committee to consider this and other club activities, to report to the Board of Directors (Council).

The meeting adjourned at 3.45 p.m. After a short interval there were the following talks:

Major Walter A. Wood spoke of the three months' winter training in the mountains between Jasper and the Columbia Icefield, of the Lovat Scouts, in the winter of 1933-44. Many winter first ascents were made along the Divide and in the Maligne Lake, Tonquin Valley and adjacent areas. A short and spectacular sound film was shown to illustrate.

W. P. House talked of some of the mountain equipment developed by the Quartermaster Corps, and displayed samples of boots, ice-axes, pitons, karabiners, nylon climbing rope, light stoves, sleeping bags, pack-board, and other items.

Major Robert H. Bates told of some of the troubles encountered in Italy, such as frozen feet, trench feet, and means used to overcome them.

Lt. Col. W. H. McLean, Chief of Research and Development Branch, Office of the Quartermaster General, spoke of some of the research problems encountered. He said that 14 club members altogether had served with the Q.M. He asked for continued cooperation by the Club and its members with the Army in developing and testing equipment after the war.

ANNUAL DINNER

The Annual Dinner was held the same evening at the Cosmopolitan Club at 7 p.m. There were about 150 present, of whom 60 were members. As last year, dress was informal. President Case presided, and seated with him at the head table were the following: Lt. Col. W. H. McLean, Major Walter A. Wood (Asst. Military Attache, U. S. Embassy, Ottawa), Lt. Col. Henry J. Hampton (85th Mountain Infantry), Col. J. T. Wilson (Director of Opera-

tional Research, General Staff, Nat. Def. Hq., Ottawa), Hon. John J. McCloy (former Asst. Secretary of War), Major A. H. Jackman, Lt. Wilson P. Ware (85th Mountain Infantry), and the Secretary.

After greeting and other appropriate remarks by the President, the following program commenced:

Dr. J. Monroe Thorington showed a series of colored movies taken by him of game, large and small, far and near (particularly some remarkable close-ups) in various parts of the Canadian Rockies. These films of Dr. Thorington's get better, if possible, each year, and show evidence of great patience and attention to detail by the photographer.

Lt. Wilson P. Ware, who had been Lt. Col. Hampton's Intelligence Officer in the 85th, gave a very detailed and interesting account of the battle for Riva ridge in the Apennines, illustrated by slides showing diagrams and pictures of the terrain. This successful battle and the following capture of Mt. Belvedere and subsequent rout of five German divisions were the culminating climax to the career of the 10th Mountain Division, the first strictly mountain troops ever organized and trained by the U. S. Army. Key positions held by the Germans were taken at night by assault parties scaling cliffs and gullies thought unassailable by the enemy. The entire Division, including the 85th, 86th and 87th Mountain Infantry, and the battalions of Mountain Field Artillery and other units, about 14,000 men, took part in several mountain battles from February through April, with recorded casualties of about 4500 men. Lt. Col. Hampton assisted Lt. Ware as he spoke by pointing to features on the screen. This very unusual and informative talk by our member, who had been himself severely wounded, ended in prolonged applause.

Lt. Col. Hampton said that the War Department was well aware of the part which the mountaineers of this country, and particularly the members of the American Alpine Club had played in the final results, and bespoke again, as had Lt. Col. McLean in the afternoon, our continued interest and cooperation with the Army in keeping alive this specialized branch of its training, which had now thoroughly demonstrated its value in the field of battle.

The gathering began to disperse at 11 p.m.

Henry S. Hall, Jr.,
Secretary

REPORT OF THE TREASURER

November 1, 1944—October 31, 1945

Cash Receipts (Operating):			
Dues— 8 @ $15	$ 120		
187 @ 10	1,870		
33 @ 5	165	$ 2,155.00	
Interest and Dividends		777.73	
Sales—*American Alpine Journal*		278.46	
Guide Books and Handbook and others		52.57	
Howard Palmer books		244.85	
Dinner Receipts		444.50	
Royalties ($60.23), miscellaneous ($5.80)		66.03	
		$ 4,019.14	
Cash Disbursements (Operating):			
Rent and Maintenance of Rooms		$ 1,457.16	
Publication 1945 *American Alpine Journal*		1,011.91	
Dinner		393.29	
Library—Acquisitions (including $200 for Howard Palmer books)		295.82	
Expenses		422.83	
Miscellaneous		345.80	
		$ 3,926.81	
Excess operating receipts over disbursements			$ 92.33
Cash Receipts (Non-operating):			
Contribution		$ 1,000.00	
Mortgage paid off (loss, $193.51)) (Club House Fund)		2,468.62	
U. S. 4's '44 called (loss $103.33) (Reserve Fund)		1,000.00	
		$ 4,468.62	
Cash Disbursements (Non-operating):			
Purchase of Securities:			
For Reserve Fund,	1,000 U. S. A. Series G	$ 1,000.00	
	200 U. S. A. (reserve for lists)	200.00	
Library Fund,	10 Amer. Tel. & Tel.	1,646.85	
Library Fund,	15 Union Pacific pfd.	1,519.85	
Club House Fund,	100 Corning Glass Works	2,500.00	
Club House Fund,	10 Eastman Kodak common	1,976.85	
Club House Fund,	10 International Business Machines	2,026.85	
Various Funds,	40 General Electric	1,967.29	
	150 Taca Airways	918.75	
		$13,756.44	
Excess non-operating disbursements over receipts			$ 9,287.82
Cash Balance, November 1, 1944		$11,025.71	
Add operating cash surplus receipts		92.33	
			$11,118.04
Less non-operating excess of disbursements			9,287.82
Cash Balance, October 31, 1945			$ 1,830.22

Bank Balances, October 31, 1945:

General Account (includes Map Fund)	$ 1,701.45	
Library Endowment	71.45	
Edward Whymper Fund	21.27	
Reserve Fund	26.71	
Club House Fund	9.34	
		$ 1,830.22

Securities Owned:	*Cost*	*Market Oct. 31, 1945*
Whymper Fund:		
4 General Electric	$ 196.50	$ 189.00
Library Fund:		
10 Amer. Tel. & Tel.	1,646.85	1,867.50
15 Union Pacific pfd.	1,519.28	1,665.00
5 General Electric	246.61	236.25
Reserve Fund:		
1,000 U. S. A. Series G	1,000.00	1,000.00
23 General Electric	1,131.19	1,086.75
Reserve for Publishing List of Members:		
400 U. S. A. Series G	400.00	400.00
Club House Fund:		
1,600 U. S. A. Series G	1,600	1,600.00
2,150 par U. S. A. Series F	1,612.50	1,612.50
10 shares General Gas & Electric prior 5% pfd.	991.67	1,030.00
100 Corning Glass Works	2,500.00	3,487.50
10 International Business Machines	2,026.85	2,220.00
10 Eastman Kodak (Common)	1,976.85	2,200.00
150 Taca Airways	918.75	2,250.00
8 General Electric	392.99	378.00
Unrestricted:		
10,000 U. S. A. Series G	10,000.00	10,000.00
Total Securities	$28,160.04	$31,222.50

In addition, the American Alpine Club owns a substantial library on mountaineering, insured at $10,000, and a stock of saleable back numbers of the Journal and guide books.

Not included above are following assets of Research Fund:

	*Cost**	*Market*
50 shares Corning Glass	$ 1,250.00	$ 1,743.75
Cash ($125 in General account)	137.50	

*Held, subject to contributions to be solicited shortly for the Research Fund.

Respectfully submitted,

JOEL E. FISHER,
Treasurer

REPORT OF THE LIBRARIAN

November 1, 1944—October 31, 1945

Last winter an effort was made to encourage members to make greater use of the library by having the rooms opened additional hours, one afternoon and one evening each week. Since no one took advantage of this opportunity to explore the resources of the library under the supervision of the librarian, the latter will hereafter confine her time to morning hours except by appointment.

During the year 242 books were acquired by the library, making a total of 4190 bound volumes and pamphlets. Little space is now left for further additions. The club purchased 501 books from Howard Palmer's estate. Of these 188 were added to the library; numerous rare and autographed duplicates were also retained as well as 70 bound volumes of duplicate journals (stored by Mr. Case for the club). The remaining duplicates were sold for $290.25, covering the purchase cost and railway express for the 34 cartons. The additions included books on the Alps, Canada, Himalayas, United States, flora, geography, geology, voyages and travel, etc., a very fine collection.

Various books were purchased by the club and the remaining were donated by Dr. Thorington, Mr. Fisher, Mr. Hall, Jr., Mr. Ullman, and publishers.

We are deeply indebted to Dr. Thorington for his generous contributions of rare books, photos, reprints, maps, journals, files of letters, souvenirs and three framed pictures: oil paintings of the Rocky Mountains by Albert Bierstadt; The Watzmann, highest mountain of the Berchtesgaden Alps by Köhnholz (1870); a pencil sketch of Turin and the Alps from Superga (1817) by Turner.

Miscellaneous donations were received from Dr. Gaebelein, Dr. Howorth, Mr. Place and Dr. Strong. Members are again urged to donate spare copies of the A. A. C. Journals, now out of print, 1930-31, 1933-35, 1937.

An electric fan and a large rug for the front room, given by Mr. Fisher, were greatly appreciated.

We have welcomed with pleasure long-distance members and other visitors to the club rooms, the latter including numerous members of the armed forces. Their requests for data on altitudes, climbing and skiing, maps, and mountaineering books have been answered as fully as possible and provision made for their special use of the library.

The librarian extends her thanks to Mr. Kothe, Lt. Oberlin and Mr. Walsh for their assistance in the care of the rooms. We are all especially grateful to Mr. Walsh for his very fine work in reconditioning the leather bindings of over 1000 books.

HELEN I. BUCK,
Librarian.

IN MEMORIAM

JOHN ANDREW McCOWN, II
1918 - 1945

John McCown was born in Philadelphia on July 4th, 1918. He was educated at Wm. Penn Charter School, from which he graduated in 1936, having been a three-letter man as well as a member of the Senior Honorary Society. He graduated from the University of Pennsylvania in 1940, playing for three years on the Varsity Lacrosse team and winning his letter.

He entered the University of Virginia Law School, but shortly after Pearl Harbor he was recommended by the Club, as well as by the Ski Association of America for service with mountain troops. He received his training at Camp Roberts, Cal., and Camp Hale, Colo. He attended and was graduated from the Infantry School, Fort Benning, Ga., in December, 1942, later being promoted to First Lieutenant. He commanded the Army Assault Mountain School for many months and put through thousands of men who are now seeing service in Europe.

He was sent overseas in December, 1944, and went into action with the 10th Division (86th Mountain Infantry Regiment) on January 19th, 1945, as a member of the night ski patrol for several weeks. After a few days at a rest area he returned to the front, and was instantly killed when the patrol which he was leading was ambushed by light machine-gun fire. This was during the assault on Mt. Belvedere in the Apennines. He was buried in a military cemetery in Northern Italy.

His citation, accompanying the posthumous award of Silver Star follows:

> "John McCown, 01305285, First Lieutenant, Infantry, 86th Mountain Infantry, United States Army. For gallantry in action on 20 February 1945, near Riva Ridge, Italy. When a strong counterattack had driven a company from a newly-won mountain ridge, and four men had been left behind, First Lieutenant McCown volunteered to lead a patrol back onto the ridge in an attempt to rescue the soldiers. Nearing the objective he and his men were ambushed by a superior enemy force, whose initial burst of fire killed two men and forced all to take cover. He immediately crawled forward to a position from which he could observe the enemy and direct the fire of

his patrol on the hostile positions. Although wounded three times by machine gun bullets, he continued to direct the deployment of his men, calling his orders to the soldier nearest him. As he raised up to see that his instructions were understood, he was struck again, and died almost at once. His splendid heroism was an example to his men, who fought on until they were able to win their way to the objective. First Lieutenant McCown's gallant courage and leadership have earned him perpetual fame in the finest traditions of the United States Army."

John McCown was elected to the American Alpine Club in 1940, on the basis of four seasons of climbing, much of it in the Teton area, including four ascents of Grand Teton by various routes. In 1941 he visited the Coast Range of B. C., back-packing through the Homathko Valley to Scimitar Glacier. Had he emerged from the war, his qualities of leadership would undoubtedly have secured him a notable position in expeditionary mountaineering.

R. H. B.

[Through Sgt. R. P. Longaker, we have received photos of the attack on Rocco Roffeno, S. W. of Bologna, on April 14, 1945, together with ten issues of *Blizzard*, the official paper of the 10th Mountain Division. The issue of March 7 contains five drawings of patrol action on the Mt. Mancinello-Mt. Campiana ridge on the night of February 18-19. Two of the pictures show Lt. John McCown leading. These items have been added to the Club library.—Ed.]

ARTHUR OLIVER WHEELER

May 1st, 1860 - March 20th, 1945

As rugged in character as the mountains he surveyed, few have been so completely identified with mountains and mountaineering as Arthur Oliver Wheeler, who led the strenuous life of a mountain topographer for more than 30 years, founded the Alpine Club of Canada, was its first President, its Managing Director for 20 years and its Honorary President until his death.

Born in Ireland, educated there and in Dulwich College, London, he came to Canada in 1876 and took up land surveying in which, for the next 9 years he worked in midwestern Canada, often under extreme pioneering conditions.

His preparation for the life of a mountain topographer began when, in 1885, having been appointed to the Surveys branch of the Department of the Interior under Dr. Deville, originator of Canadian photo-topographical methods, he learned these methods and cooperated with him in the mapping of parts of the Canadian Rocky Mountains until, in 1890, he entered private practice.

JOHN ANDREW McCOWN, II
1918-1945

ARTHUR OLIVER WHEELER
(1860-1945)

Returning to the Department of the Interior in 1893 he began, in 1895, that period of mountain surveying and mapping which continued with only minor interruptions until the completion of the Alberta-British Columbia provincial boundary survey in 1925.

Starting with the mountain foothills bordering the great plains of southern Alberta, he worked successively in the Crowsnest Pass coal mining region, the Selkirk Mountains along the route of the Canadian Pacific Railway, and the main range of the Rocky Mountains, a portion of 1903 being spent in surveying and reporting upon a definitely assigned part of the International Boundary between Alaska and the Yukon Territory, which was then being arbitrated in London. This was followed by 12 years of active survey and mapping work along the great divide during which he was Commissioner for British Columbia on the Interprovincial Boundary Survey, and surveyed and mapped some 600 miles of the main range of the Rocky Mountains. This work completed, he retired from active practice as a surveyor but supervised the production of several maps for the Canadian Pacific Railroad in subsequent years.

The mountaineering aspects of the work in the Selkirks were described in Mr. Wheeler's beautifully illustrated book, *The Selkirk Range*. This 459-page work, which includes separate sections on "The Survey," "Travel and Exploration," "Previous Surveys" and "Mountaineering in the Selkirks," breathes Mr. Wheeler's deep love of the mountains and his keen desire to spread a knowledge of them. With the maps, which comprise Volume II, it is a complete résumé of knowledge of the Selkirk Mountains down to 1905, and a classic of mountaineering literature.

The years of work in the main ranges resulted in three folios of splendid maps, and three volumes of text well planned to serve the needs of mountaineers.

Of all of Mr. Wheeler's accomplishments, those which seemed to give him the greatest personal satisfaction were the founding of the Alpine Club of Canada and of the Canadian Alpine Journal. In his In Memoriam article in memory of Professor Charles E. Fay, published in the latter, Mr. Wheeler tells of his first meeting with Professor Fay and of this discussion of the formation of American and Canadian Alpine Clubs. He said:

> "I first met the Professor at Glacier House in 1902 . . . We then discussed the formation of an American and a Canadian

> Alpine Club, and the same year Professor Fay founded the American Alpine Club,* of which he was the first President. It was not until four years later, 1906, that, with the assistance of Mrs. H. J. Parker of the Manitoba Free Press of Winnipeg, I was able to found the Alpine Club of Canada, and then, also, became its first President."

In a talk at the camp fire on one occasion Mr. Wheeler stated that at this meeting at Glacier House he and Professor Fay considered the formation of a single all American Club of which there should be Canadian and American Sections. Mr. Wheeler, however, decided in favor of a separate Canadian Club, and, according to a note in Appalachia (vol. 11, 1906, No. 1, p. 146), the same decision was reached, after discussion, at the founding meeting.

Of the intervening period between 1902 and 1906, Mr. S. H. Mitchell, Secretary-Treasurer and subsequently Honorary Secretary said:

> "Then Mr. Wheeler waged a crusade through the length and breadth of Canada, Mrs. Parker wrote inspiring articles in the Manitoba Free Press, which were widely copied, and by the work of these two alone was this Club called into being" . . .

The first encampment was held the same year and in the following year Mr. Wheeler prepared the first issue of the Canadian Alpine Journal and continued as its Editor until 1926, with Mr. S. H. Mitchell as Assistant Editor.

As President of the Club Mr. Wheeler initiated the plan of holding annual encampments at suitable climbing centers in the mountains and of making these a means of spreading the gospel of the mountains by specializing in the instruction of beginners in the rudiments of mountaineering. One of the very important features of these "Camps" was the presence of two Swiss Guides loaned, through Mr. Wheeler's solicitation, by the Railway Company serving the territory. To them he attributed the generally sound climbing technique developed among the Club members. The attractive Club House on the slopes of Sulphur Mountain in Banff was designed and its construction supervised by Mr. Wheeler in 1909.

As its "Managing Director," an office perhaps peculiar to that Club but important for its contemplated activities in its early years,

*Professor Fay shared with several others the initiative in founding the A. A. C.—*Ed.*

he organized and managed the annual camps and directed their activities for 20 years, devoting much of his thought and energy to the effort to realize his ambition of giving to the Alpine Club of Canada a standing which would entitle it to be ranked among the leading Alpine Clubs of the world. It is safe to say that few events ever gave him more satisfaction than its acceptance, as an affiliate, by The Alpine Club (London).

As Director of the Club, also, he organized and led the 1911 expedition to the then little known, Mt. Robson region; mapped it by photo-topographical methods; made a reconnaissance survey of the Maligne Lake district and was the instigator and official executive of the Mt. Logan expedition, selecting the leaders, Captain A. H. MacCarthy and Mr. H. F. Lambart.

In 1907, as President of the A. C. C., Mr. Wheeler attended the Jubilee celebration dinner of The Alpine Club (London) and in 1920, although unable to be present in person, he organized the Club's representation and exhibit at the Allied Congress of Alpinism held in Monaco. In the preparation of this exhibit he was greatly assisted by Dr. Deville, the Surveyor General. For this he received from the Prince of Monaco the Cross of the Order of St. Charles. The same honor was also awarded to Professor Charles E. Fay representing the A.A.C.

Mr. Wheeler was much interested in glaciers, was for many years the Canadian representative on the International Commission on Glaciers and, from the early days when he cooperated with the Messrs. Vaux in their glacier observations down to quite recent years, made scientific observations on them, enlisted the efforts of Club members in so doing and was the author of numerous reports and articles concerning them. He was also an early advocate of the use of the airplane for mountain reconnaissance work.

Mr. Wheeler was an Honorary Member of The Alpine Club (London), elected in 1908 on the proposal of the famous mountaineer, Edward Whymper. He was also an Honorary Member of the Club Alpin Français. He became a member of our Club in 1903 and an Honorary Member of the Appalachian Mountain Club in 1904.

Mountains and mountaineering continued to be his chief interests to the end. An Alpine Club friend, calling on him a few evenings before his death found him deeply engrossed in the latest book on Mt. Everest, eager to discuss the problems involved in a

safe ascent and descent of the final peak and to debate the possibility that Mallory actually reached the top on the third expedition.

Mr. Wheeler was a man of great physical and mental vigor admirably equipped to endure the hardships and extreme physical exertion incident to the life of a topographer in a wilderness of major mountains. He brought to the work a high intelligence, a love of nature and a devotion to mountains which made the hardships a labor of love. It is easy to note in some passages in his writings how the topographer had to struggle with the mountaineer in him, to forego a coveted summit in the interest of topographical observations.

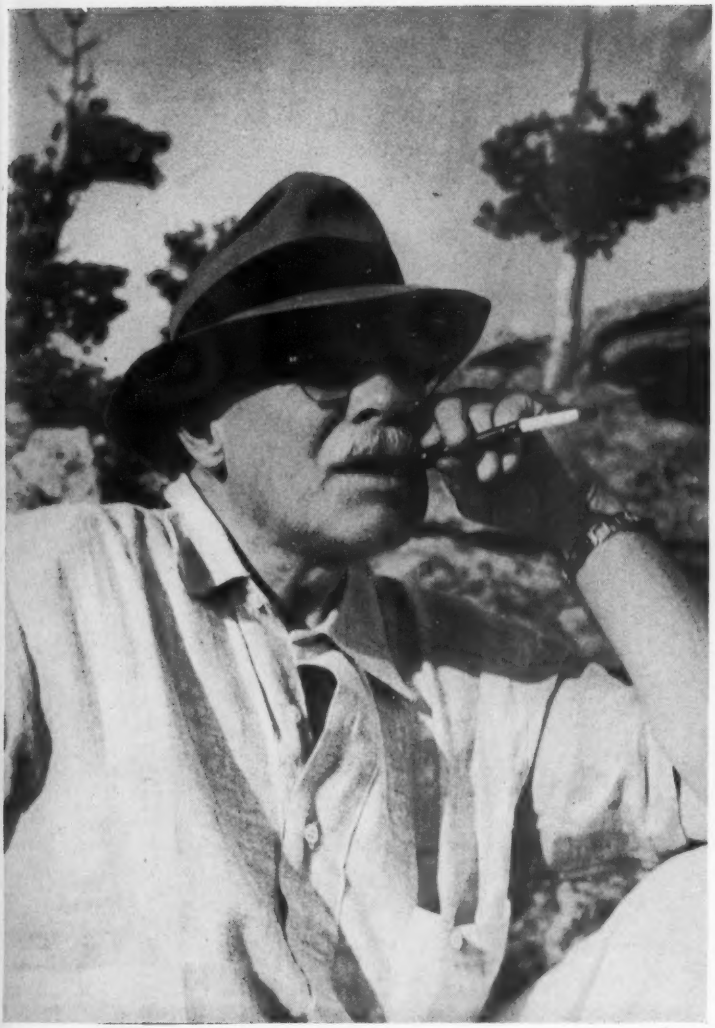
Few have done as much to promote mountaineering and develop mountaineers on this side of the Atlantic. For so many years had he been thus active that to many he had become almost a legendary figure and the number who look back with pleasure to his cheery presence at the Club encampments and his amusing, instructive and inspiring talks around the camp fire is undoubtedly very large. If it be true that a Gaelic sarcasm sometimes hurt feelings and aroused resentment, it was far more often true that Gaelic cheerfulness, philosophy and helpfulness inspired cooperation and kindled affection. Most of all he sought to bring to others that appreciation of mountains which gave to him so much of inspiration and uplift. He was a unique figure; he accomplished much. His work and his memory will live.

F. N. W.

Mr. Wheeler was married in 1887 to Miss Clara Macoun, daughter of John Macoun, distinguished Canadian botanist. She was of great assistance to him in the organization and operation of the Club's annual encampments. She died in 1919. A few years later he was married to Miss Emmeline Savatard who survives. He is also survived by his son, Brigadier General Sir Edward Oliver Wheeler M.C. Surveyor General of India and his grandson, John, a student at the University of British Columbia at Vancouver.

FREDERIC KING BUTTERS
1878 - 1945

Professor Butters was born at Minneapolis, Minn., on February 8, 1878, and died there August 1, 1945. He was unmarried. The family name was originally Butter, his ancestors coming from Scotland and settling in Woburn, Mass., prior to 1665.



FREDERIC KING BUTTERS
(1878-1945)

Photo, L. I. Smith

Butters graduated from the University of Minnesota in 1899 with the degree of B. Sc., and took his B.A. at Harvard in 1900. He was a member of Phi Beta Kappa and Sigma Xi. He served as instructor in botany and pharmacognosy at Minnesota, 1901-10, as assistant professor, 1910-19, associate professor, 1919-34, thereafter held the position of professor of botany until his death. He was a Fellow of the Royal Geographical Society, a member of the Alpine Club of Canada (1913) and of the American Geographical Society. He joined the American Alpine Club in 1910. He was the author of *Trees and Shrubs of Minnesota,* and had almost completed a book on ferns, on which he was an outstanding authority.

As a mountaineer, Butters introduced E. W. D. Holway to the Selkirks in 1904; Howard Palmer joined them in 1908, and thereafter this trio made history in their exploration of remote areas of the northern and southern Selkirks, although Butters was unable to take part in the final and successful assault on Mt. Sir Sandford in 1912.

Of these three, however, the Swiss guides regarded Butters as the soundest and steadiest climber, his ascents covering a period of 30 years. He seems never to have visited the Alps, but in the Selkirks alone he accomplished more than 50 major climbs, including such first ascents as Cyprian Pk., Mt. Kilpatrick, Augustine Pk., Guardsman Mtn., The Footstool, Alpina Dome, Pioneer Pk., Mt. Topham, Citadel Pk., Belvedere Pk., Goldstream Pk., Mt. Redan, Austerity Mtn., Mt. Holway, and the unnamed 10,500-ft. peak of the Battle Range. By 1913 he had made 15 traverses of Asulkan Pass, eight of Donkin Pass and four crossings of Illecillewaet névé, all guideless.

For the *Canadian Alpine Journal* he wrote "The Flora of the Glacier District" (xxi, 139) and for Palmer's *Selkirk Range* the appendix dealing with botany. He made a relief of the Selkirk Range from Rogers Pk. to Grand Mtn., which has been secured for the American Alpine Club.

J. M. T.

ELIZABETH LARNED MacCARTHY
1877 - 1944

On February 10, 1944, when we were in the woods with her devoted dogs enjoying the morning sunshine and the scent of the forest at Camden, S. C., Elizabeth Larned MacCarthy suddenly passed through the veil that divides this life from the mysterious

beyond, where perhaps she now has been granted her long cherished wish that she might learn the secrets of Nature and so take her place as a part of the creation that held her greatest interest throughout her eventful life.

Her childhood years of play with her three devoted brothers at Summit, N. J., gave her a strong trend away from feminine things and for athletic sports and especially for skiing, skating, tennis, riding and climbing, in all of which she became proficient. She thoroughly enjoyed taking part in or watching all kinds of clean sports and her considerate appraisal of one's efforts was gauged by the precept that:

> "When the Great Scorer comes
> To mark against your name,
> He writes not that you won or lost
> But how you played the game."

Long summers of her girlhood and early mature years spent at Lake Placid in the Adirondacks soon made her a true child of nature and happiest when she was on the high trails, in the deep forests or exploring in the mountains where she seemed to make intimate friends of all of nature's attractive features and creatures, and she held life in all things in respect and appreciation.

Having roamed the hills and among the giant trees, which were her special favorites, and climbed the major peaks of the Adirondacks, some of them many times, until the whole countryside had been thoroughly explored, she began looking afield and, in 1911, made her first trip to the Canadian Rockies where, at the Lake O'Hara Camp of the Alpine Club of Canada, she qualified for membership on Mount Victoria and thus set a pattern for me to follow the next year when we began our years of mountaineering together on this continent and in foreign lands.

Her long list of major peaks speaks eloquently of her skill as a climber and especially so when it was her habit to insist that no assistance be given her on a climb unless she called for it, which rarely occurred.[1]

The summers of exploration and climbing in the western States and Canada were followed by seasons of interesting ranch life where there always was need for an extra hand to help with the

[1] She was the first woman to ascend Mt. Hungabee, in the Canadian Rockies; and, in the Purcell Range. took part in the first ascents of Howser and Bugaboo Spires.—*Ed.*

clearing of land, the planting of crops and their irrigation, the tending of stock, the harvesting, and the round up of cattle in the fall; while, between times, there were miles of fence line, and irrigation ditches to ride and repair and in all these activities Mrs. MacCarthy took a keen interest and an active part and generally finished the day with household duties and the cooking and serving of a delicious supper.

For years her German shepherds were her constant companions whenever she went about the ranches on foot or horseback and they gladly assumed the responsibility as her protectors whenever strange persons or wild animals came near, for the K-2 Ranch near Lake Windermere at the source of the Columbia River, was a sanctuary for all wild animals who seemed conscious of their security and large animals came in considerable numbers while in the fall ducks and geese came by the thousands; and frequently these animals, both large and small, would remain near at hand for close inspection before leisurely walking or flying away.

While keeping in touch through the daily papers with current events, Mrs. MacCarthy was an insatiable reader during the evenings and when inclement weather interfered with outdoor activities and she was especially fond of the works of the old authors, books on nature, travel, and exploration, and frequently would read three and four books on varied subjects at the same time, alternating her food for thought as one enjoys a varied diet. Books on travel and exploration occasionally stimulated discussion about trips to interesting foreign lands and some journeys were actually planned and reservations secured only to be cancelled later because she could not bear to leave her interesting library and her faithful dogs behind.

Thus the active years were spent close to nature in happy, useful occupations free from the fetters of conventional life which always seemed to repress her spirits and make her long for an escape to her haven of freedom; so, when the end came, I was reconciled to carrying out my wife's wishes that she be returned to her many little sanctuaries for her eternal rest.

Therefore I gave her ashes to the breezes on the mountain tops, in the forests, at the pond and lake sides, along the brooks and streams and among the wild flowers, all of which she held as blessed friends in the Adirondacks, the Purcells, and the Rockies where

some day I trust I may be permitted to rejoin her and continue our thirty-nine years of happy companionship.

And so it is that I find solace in Thomas More's consoling words:

"Oh, My Beloved where'ere I turn,
Some trace of thee I find.
In every star thy glances burn,
Thy blush on every floweret lies.
Nor find I in creation aught,
Of bright, or beautiful, or rare;
Sweet to the sense or pure to thought
But thou art found reflected there."

A. H. MacC.

EMILY YOUNG O'BRIEN
1866 - 1945

Emily Young O'Brien was born in Lisbon, N. H., October 28, 1866, and as a girl early acquired a love for the mountains and forests of northern New England. She graduated from Boston University in 1891, as valedictorian of her class, and from the Boston University Medical School in 1893. She practised medicine for a few years at the end of the last century and was at one time on the house staff of the Westborough State Hospital, not a common achievement for a woman in those days. In 1895 she married Robert Lincoln O'Brien, living first in Washington and later in the neighborhood of Boston. During the first World War she did a great deal of work in the hospitals and recreation centers of Camp Devens and later gave her attention to the disabled veterans. She was head of the Disabled Veterans' Hospital Service from its founding at the close of the first World War.

All her life she loved the out-of-doors and particularly the mountains, starting with tramping and camping in her girlhood. In 1914 she made her first trip to Europe and her first acquaintance with the Alps, climbing the Grand Muveran with her children. Later she made many more trips to the mountains of Europe and Canada, climbing in the Dolomites, Oberland, Chamonix and Zermatt regions, the Selkirks and Rockies. At the age of 59 she traversed the Grépon and at 63 did the Jungfrau, Mönch and Wetterhorn. Several years later she was still doing smaller expeditions in the Alps, as well as climbing, summer and winter, in the Presidential Range which she greatly loved.

M. O'B. U.

SAMUEL EVANS STOKES ALLEN
1874 -1945

The death of S. E. S. Allen, pioneer in the Lake Louise district, on March 27, 1945, gives release to one whose brilliant mind early became clouded, who had lived in confinement for more than forty years, his only memories being of the mountains he had loved in youth.

Born in Philadelphia on February 8, 1874, the son of Theodore M. and Helen (Stokes) Allen, he graduated from Yale in 1894 and took his M.A. there in 1897. He was a member of Phi Beta Kappa.

In July, 1891, returning from the Sierra Nevada, Allen had his introduction to Canadian mountains. He visited the Illecillewaet névé, Emerald Lake, and the fossil-bed on Mt. Stephen. From Lake Louise he ascended a point which he named Devils Thumb. In 1892 he travelled in Europe, gaining the summit of the Matterhorn in September.

Returning to Canada in 1893, he climbed Mt. Rundle, the view of Mt. Assiniboine making a great impression on him. At Lake Louise he made two unsuccessful attempts to ascend the N. peak of Mt. Victoria, being defeated by avalanches just below the Victoria-Collier notch. After an excursion up Mt. Fairview he, with a white companion, and an Indian, penetrated to a little lake in Paradise Valley (to which he gave the name Wenkchemna), on the east side of Mt. Temple, reaching 10,000 ft. on the S. W. ridge of that mountain.

At Glacier, Allen and W. D. Wilcox made the first ascents of Eagle Pk. and Mt. Cheops, and, with H. P. Nichols, Allen crossed Asulkan Pass to make the second ascent of Mt. Fox.

In the summer of 1894, Allen went to Lake Louise to join a group of Yale students, arriving just after the accident in the Lefroy couloir, when L. F. Frissell was injured by a dislodged boulder. Allen ascended Mt. Piran and began a survey of the region, laying out a base-line for a distance of one mile on the railroad east of Laggan station, continuing with prismatic compass and aneroid.

A few days later, Allen, Henderson, Warrington and Wilcox crossed the east Mitre Pass to Paradise Valley. Soon afterward, Allen and Henderson established camp below Sentinel Pass. Crossing the pass on the following day, Allen again saw the peaks across

Moraine Lake and gave them Indian numeral names, from One to Ten. Frissell and Wilcox then rejoined the party; they crossed Wastach and Wenkchemna Passes and saw Opabin Pass, to the top of which Allen went alone next day and named Mts. Biddle, Ringrose and Huber. With Frissell and Wilcox, in this season, Allen took part in the guideless first ascents of Mts. Aberdeen and Temple, the latter the first peak of the Canadian Rockies above 11,000 ft. to be ascended.

In September, Allen completed his summer by a trip to Lake O'Hara, which he named. We also owe to him the names Oesa, Wiwaxy and Yukness. Lacking other companions, he took with him Yule Carryer, an Indian who had been a student at the University of Toronto, and who was then working for the railroad at Field. Together they reached the summit of Abbot Pass (then known as the Death Trap) from the Lake O'Hara side, being the first to attain that saddle. They then returned to the railroad and made a flying trip to Mt. Assiniboine, by way of Vermilion Pass and Cross River, coming out on Healey Creek.

With H. F. Smith, Allen returned to Mt. Assiniboine in July, 1895, by way of Banff, Healey Creek and Simpson Pass, being the first visitors to examine the mountain's S. W. face.

It was Allen's fate never to see the mountains again. His father did not encourage him, and his privately-printed map (*ca.* 1894-95) was not widely circulated. This map, now very rare, for the first time presented much of the accepted nomenclature of the Lake Louise area. [Articles by Allen appeared in *A. J. 18,* 96, 222, 397; and *App.* vii, 281.] Allen's mind failed a few years later, symptoms of dementia praecox manifesting themselves. He never knew that one of the finest of the Ten Peaks was at long last given his name. Although not a member of this Club, his pioneer efforts and achievements should be remembered. J. M. T.

THOMAS RIGGS
1873 - 1945

Thomas Riggs, an honorary member of the Club, was born in Ilchester, Md., October 17, 1873, and died in nearby Washington in January, 1945, but during his more than three-score years and ten he spent much of his time thousands of miles away in the rugged Alaskan wilderness. Following undergraduate days at Prince-

ton, and three years in the lumber business in Washington, Riggs headed north to the Klondike in '97 with some of the first gold seekers.

This was his first experience with prospecting and he ran the gamut of failure and success. Far more important to him than nuggets, however, were his rough and tumble experiences during ever known it, and Alaskans came to know him. He returned "down below" in 1902, only to go back to Alaska the next year as a member of the U. S. and Canadian Boundary Survey, and during the next three years advanced to become head of the party.

The rugged life of a surveyor in unmapped country greatly appealed to Riggs and he was a success from the start, as many an aging sourdough in the north country will gladly attest. In miner's boots and caribou jacket he worked steadily along the snow covered, jagged boundary where the St. Elias Range separates Alaska and Canada, making repeated ascents requiring real mountaineering and exploring the country in the true sense of the word.

Ensuing years found Riggs in turn Topographer of the U. S. Geological Survey, Surveyor to the Alaska Boundary Survey and Officer in Charge of the Fairbanks Division of the construction of government railroads in Alaska.

From 1918 to 1921 Thomas Riggs was Governor of Alaska, to the great benefit of Alaskans in all walks of life. Subsequently, he was appointed International Boundary Commissioner, an office he fulfilled brilliantly until his death. During his later life Riggs took a great interest in expeditions of all kinds into Alaska and the Yukon, and was particularly interested in the activities in the St. Elias Range of various parties from the American Alpine Club. He was one of the great Alaskan pioneers, a man whose warm, genial personality and ability to take decisive action will never be forgotten by those who knew him.

R. H. B.

BOOK REVIEWS

The White Tower, by James Ramsey Ullman. 8vo.; 479 pages. Philadelphia: J. B. Lippincott, 1945. $3.00.

Five mountain climbers, of as many nationalities, and a guide, meet during wartime by super-coincidences in Kandermatt, Switzerland, where they determine to attempt a new route on an unidentifiable local peak, strangely Himalayan in stature. Their adventures over two weeks on this climb, during which each one reveals his philosophy in the way in which he tackles difficulties, comprise the story. The non-climber, accepting it at face value will find it a thrilling tale.

The experienced mountaineer, however, cannot fail to compare the details of the story with his own experiences and to raise many questions as to the accurate rendering of a great climb. But there are probably 10,000 non-climbers who will read this book to every reader who is an expert, and it is a fact that if one wishes to popularize mountaineering by writing a best-seller which features a mountain ascent, one will have to picture it the way the public wants it to read, with each thrill raised to the Nth degree.

In *The White Tower* a mountaineer who knows the Alps will be quick to criticize many features in the description of the ascent—jumping *up* over a bergschrund; cutting steps in ice which is found to *overlay* snow; an icefall, with séracs, located *above* the bergschrund; *five* kinds of rock on one peak—are a few examples. However, there is no argument but that Mr. Ullman has done an outstanding service for mountain climbing in presenting the subject in a way which has aroused great interest in mountaineering among the American public. An entire Fifth Avenue publisher's window features it; on the subway and surburban trains war-workers and shopgirls are engrossed in reading it, and we cannot at this moment foresee what a popular lift it will undoubtedly give to mountaineering in the summer of 1946, perhaps with Hollywood's help.

While this reviewer would like to see the author produce a novel based on the milder actual experiences of some true Alpine ascent, the reading public has changed greatly since *Running Water,* and such a book today would probably fall flat. Let us then recognize that *The White Tower,* by depicting almost every imaginable

technique of climbing hung on to what might be called a "Beispielspitze," is rapidly awakening throughout the country a keen interest in mountaineering.

J. E. F.

Brenva, by T. Graham Brown. 8vo., 225 pages, with 72 photographs and a map. London: J. M. Dent and Sons Ltd., 1944. Price 25 s.

The Brenva face of Mont Blanc, facing almost directly toward the Italian side of the Col du Geant, is one of the few great Alpine faces which has not attracted a swarm of suicide climbers during the past decade. Unlike the Eigerwand, the N. faces of the Grandes Jorasses and Matterhorn, and the pinnacles of the Wilder Kaiser, relatively little climbing has been done here and that little by a few individuals. This book is the chronicle of ten years' devotion to this problem by the climber who knows it best.

During the First World War Dr. Brown dreamed of the Brenva face, which he knew only from the pages of a novel, but it was not until 1926 that he first saw it, was drawn by its challenging beauty, and delineated the three great ridges: The Sentinelle, Route Major, and Via della Pera which together form his "triptych." For the next ten years he devoted most of his considable mountaineering energies to the conquest, one by one, of these superb routes which undoubtedly are three of the grandest climbs in the Alps. It is unique that the larger part of the climbing history of so great a face should have been made exclusively by one man and his several companions.

From his book one can clearly see how entranced with his "triptych" the author became. His tale is really a romance between the mountain and the man, but the man is a scientist, and woven into his romance we find precise measurements, detailed descriptions, and exact times. In places the story is repetitious and drawn out, particularly in developing the theme of the "triptych." In the more dramatic situations the author underplays the action with that understatement which we Americans claim is typically British. The reader regrets at times that the style is not more spontaneous.

Brenva can serve as a climbing guide to the Brenva face of Mont Blanc, and also as an absorbing bit of Alpine history. The full page photographs are superb and very skillfully captioned. They are gathered together at the end of the volume (an exigency

of war) which is distracting and interrupts the continuity of the text.

Not the least of the attractions of this book are the brief verses by the author which head each chapter; some of these will undoubtedly appear in mountain anthologies of the future. It is a pleasurable and necessary addition to any Alpine library.

C. S. H.

The Purcell Range of British Columbia, by J. Monroe Thorington. 8vo. x+; 150 pages, with 79 illustrations and 9 maps. New York: The American Alpine Club, 1946. $2.00.

This is the first book dealing solely with the Purcell Range in terms of its history, topography and mountaineering. The narrative is based chiefly on the author's four seasons with the guide Conrad Kain in the principal eastern valleys of the range, and covers the watershed from the spectacular Bugaboo peaks in the north to the sources of St. Mary River in the South, details of the country south of Earl Grey Pass being presented for the first time. It should, therefore, prove useful to mountaineers who wish to explore the remaining unvisited corners of an unusual region, an adjacent rival of the Selkirk Range. The new maps will facilitate this, as will also the large number of illustrations.

Carl Rungius, Big Game Painter, by William J. Schaldach. 4to., 120 pages, 10 plates in full color, 20 reproductions of pencil drawings, 8 reproductions of dry-points and several pages of photographs. Edition limited to 1250 numbered copies. New York: Countryman Press (A. S. Barnes and Co., 67 W. 44th St.) Price $17.50.

This is the life story of America's most distinguished painter of big game, covering fifty years with brush and rifle. The author gives an estimate of the artist's work, his methods in the field and in the studio, his early life and growth, and his many interesting adventures in the Yukon, Alberta, Wyoming and New Brunswick. The reproductions of paintings include such subjects as elk, mule deer, pronghorn, moose, caribou, sheep, goat, grizzly and a landscape of Lake McArthur.

Many trail-riders and mountaineers who have visited the artist's studio in Banff, will welcome this splendid record of his work.

Wildwood Wisdom, by Ellsworth Jaeger. 8vo., xix + 491 pages, with 193 illustrations from drawings. New York, The Macmillan Co., 1945. Price $2.95.

The author, who is Curator of Education at the Buffalo Museum of Science, has prepared a remarkably complete little encyclopedia of woods lore. He describes and illustrates with hundreds of detailed line drawings the essential requirements of camping out. The first section of the book concerns equipment, packs, clothing, shelters, beds, fireplaces, fire building, firewood, the use of the axe and knife, sanitation, camp cookery, and the identification of edible, poisonous and useful plants and trees. The second section is devoted to the crafts and skills acquired as by-products of camping. There are chapters on barkcraft, canoes, portaging, trail craft, calling animals, primitive tools and weapons, camp furnishings, Indian lore and woods in winter. No chapters apply primarily to mountaineering equipment or practice.

We notice that one illustration for the lost woodsman is labelled "Pileated Woodpecker digs home facing east." But this direction is by no means invariable. Competent observers have reported cases where Pileateds have occupied holes facing in successive springs S., S.W., N.W., E., then again N. W. and S.W.

L. I. G.

Volcanoes as Landscape Forms, by C. A. Cotton. 8vo.; 401 pages with 223 illustrations. Wellington, N. Z.: Whitcombe & Tombs, Ltd., 1945. Price £1/12/6.

Professor Cotton of Victoria College, Wellington, has made a unique contribution to physiographic literature in this pioneer book.

After a concise introduction in whose 69 pages the mechanism of volcanism is covered, the remaining part of the book is devoted to descriptions of features of physiography resulting from volcanic actions, classified as to types, in 12 chapters, well illustrated by half tones and by line cuts of examples. These examples are drawn more from the Western Pacific than elsewhere, which is reasonable; but Pelée and Paricutin and Popocatepetl; Shiprock, Santiaguito, Stromboli; Devil's Tower (Wyoming), Death Valley (California), Deccan (India), Drakensberg (South Africa); Katmai (Alaska), Laki (Iceland), and Fernando de Noronha (South At-

lantic) are examples of its wide coverage. Ignimbrite, Nuées Ardentes; lahors, pahoehoe lava; calderas, maars, are discussed at length.

Excellent typography, a very workable subject index, and ample references make the book very useful for reference.

The author implies in his preface that he is open to suggestions as to arrangement of the subject. Divided into chapters, each devoted to a particular type of landscape, the reader sometimes feels that he is being jumped so rapidly about the earth that he is not always able to get his bearings from one example to another. Thus on page 351, within 12 lines of his text, the reader is on Lake Van, Armenia; Lake Nicaragua in Central America; Lake Kevin in Africa; and the Roman Campagna.

Recognizing that a division into chapters, each devoted to one geographical district, would be impractical, might it not be possible to systematize the descriptive matter by subheadings, where practical; or, where several short examples are cited as above, by setting them down, one paragraph apiece, against an indented margin? It seems to the reviewer that some such scheme might add to his readability of the book, and also to its value as a unique reference book, which in fact it is. From this and other recent publications in the Antipodes, our mountaineering and geological libraries should make a point to acquire more of their production.

J. E. F.

The Pacific Crest Trailway, by Clinton C. Clarke, 126 pp.; 12 detached illustrations, 5 detached maps. Pasadena: Pacific Crest Trailway System Conference, 1945. $2.25.

A description of the history, construction and location of the 2156 miles of this wilderness pathway from Canada to Mexico, together with sketch maps of the trail. In condensing over 2000 miles of trail description into 20 pages of itinerary, there is no space for any local directions, and as the free-hand maps are on a scale of 8 miles to the inch, and without contours, and with but few waterways indicated, the average hiker would do well to provide himself with U. S. G. S. or other additional maps before tackling any of this rugged trail.

A unique feature of this book are the following small encyclopedias of Pacific Coast Natural History: (1) Definition of 75

Botanical terms. (2) Description of 52 common trees found along the trail, with their localities. (3) Description of 60 animals found along the trail with their habitats. (4) Description of 86 birds found along the trail with their habitats. (5) Description of 130 flowers found along the trail with their localities. Cross indexed by colors, for purposes of identification. (6) Index of 19 canyons crossed by trail. (7) Index of 82 lakes skirted by the trail. (8) Description of 24 major peaks accessible from the trail with altitudes. (9) Index of 109 peaks accessible from the trail, with altitudes. (10) List of 53 National Parks, National Forests, and Established Wildernesses, with acreage, crossed by the trail. (11) Glossary of 38 topographic terms. (12) Index of 57 passes crossed by the trail. (13) List of 10 further projects under consideration, near trail. (14) Index of 29 main highways, with numbers, connecting with trail. (15) Index of 21 areas reserved for game, Indians, recreation, etc., near the trail. (16) Index of 26 main streams followed or crossed by the trail. Also a list of equipment and food needed for backpacking, with weights (total 41 lbs. 10 oz. plus 2 lbs. per day in food). All of which results in a very unique reference book, invaluable to anyone planning to hike through any part of this region.

The relative inaccessibility of the northern terminus of the trail, suggests that a relatively short extension could be laid out to the North, in British Columbia, reaching Coquahalla summit, 3700 ft. altitude, on the Kettle Valley division of the Canadian Pacific.

Also, while the trail must be crossed in at least 8 places by transcontinental trunk lines, there is no reference to them either in the description or on the sketch maps. Indication of the intersections of such railway lines, even when in tunnel, would seem to make these scenic trails more accessible.

In closing, a few lines from the introductory portion can be quoted with strong endorsement: "Mechanization (in America) has created a soft flabby civilization. The medical reports of the Army shows a serious deterioration in the strength of legs and back in all of the 5,000,000 (inductees) . . . too much sitting on soft seats in motors; too much sitting on soft seats in movies and too much lounging in easy chairs before radios . . . conditioning of our armed forces during the past years has stressed cross-country back-packing expeditions through wilderness. Especially valuable the contact with primitive Nature."

J. E. F.

Michel-Gabriel Paccard under der Montblanc, by Carl Egger. 8vo., 100 pages, with illustrations. Basel: Gaiser and Haldemann, 1943. $2.50.

The author is an artist, whose books on the aiguilles of Mont Blanc and the Caucasus are well known. The present volume, the first we have received from abroad since the end of the war, will give pleasure to all "Paccardists," since it confirms and supplements Dübi's long out-of-print *Paccard wider Balmat*—to which more credit should have been acknowledged. Egger's chief addition consists of the fuller extracts from Gersdorf's diary.

Escape to Switzerland, by G. R. de Beer. 8vo., 159 pages. London and New York: Penguin Books, 1945. Ninepence.

This book, written in 1943 and produced while the author was serving in Germany with the Grenadier Guards, continues his historical studies already presented in *Early Travellers in the Alps.* Colonel de Beer in civil life is reader in embryology at University College, London. His new volume covers a wide range: Alpine Analogies and Mountain Metaphors, Switzerland in Winter, Alps and Art, Alps in Music, The First Englishman on the Scheidegg, Shelley at Chamonix. The chapter on Bourrit is the result of enormous research, and the bibliographies offer much unfamiliar material.

The Rocky Mountains, by Wallace W. Atwood. 8vo., 324 pages, with 32 photographic illustrations and numerous drawings and maps. New York: The Vanguard Press, 1945. Price $3.75.

This is the third of the American Mountain Series, its predecessors having dealt with (1) the Green, White and Adirondacks, and (2) the Great Smokies and the Blue Ridge. The present volume, by the president of Clark University, will not be of great service to mountaineers expecting only accounts of ascents. In fact, the author's ascent of Uncompaghre, highest of the San Juan mountains of S.E. Colorado, is the only climb described. On the other hand, the book offers a pleasant, well-illustrated account of mountain building, and of camps and trails along the continental watershed.

There are sections on trail life during seasons of physiographic study; on mountains from the air and from the saddle; on the growth and decay of mountains; the art of camping; erosion and

growth. Ten pages only are devoted to the last ice age, and due credit is given to the spectacular quality of existing Canadian glaciers; but one becomes doubtful of the author's knowledge when one reads (p. 186) that "tongues of ice ranging up to fifteen miles in length are frequent along the route from Banff to Jasper," and that (p. 187) "the Clemenceau Icecap [*sic*] . . . may be visited without much difficulty." Among the Canadian National Parks, Robson Park is not mentioned, and, on the map of these (p. 291) the North Saskatchewan is incorrectly labelled South Saskatchewan. On p. 293, the comma between "mule" and "deer" should be omitted, unless it is intended to indicate that the former is part of the Rocky Mountain fauna—as perhaps it is in the southern groups. It also seems an unusual apportioning that one quarter of the text of a book on this great range should be devoted to prospectors, Indians, ranchmen and tourists.

Canadian Landscape, by F. H. Brigden, with biographical notes by J. E. Middleton. 4to; 112 pages with many illustrations, including 24 color plates. Toronto: The Ryerson Press, 1944 and 1945. $5.00.

This fine volume presents the work of a man of great courage, a member of the Alpine Club of Canada on artistic qualification, who, although crippled by arthritis, has attended mountain camps and recorded in vivid watercolors the scenery of the Rockies and the Selkirks. One remembers him at work in Tonquin Valley and at the site of old Glacier House, but we are here introduced to the larger panorama of his work in Canada, particularly in the canoe country of Muskoka, Nipigon and Lake Superior.

J. M. T.

1946 Am. Alp. Jour v.6 no 1

VARIOUS NOTES

If we can make our peace
Upon such large terms and so absolute
As our conditions shall consist upon,
Our peace shall stand firm as rocky mountains.

II Henry IV, *Act. IV, Sc. I.*

The War in the Alps. This has proceeded according to our prediction (*A.A.J.* v, 441), and for the first time Allied forces cut the perimeter of the main chain. The way for this was paved by the 10th Division's action on Mt. Belvedere in January, followed by the rapid April advance to the Po Valley, after which French troops began a drive through the Little St. Bernard Pass, the Mont Cenis, the Mont Genèvre and other crossings in the pattern of classical antiquity of invasion *into* Piedmont. The Brenner and other escape routes being blocked through air activity, it seemed likely that German troops would be unable to leave Italy with sufficient facility to make the Eastern Alps, even in the Berchtesgaden area, an efficient stronghold. The taking of Verona on April 26th further emphasized this since it cut the last and most northerly rail connection between Lombardy (Milan) and the Brenner Pass. German troops attempting to reach the Inn Valley were then compelled to use roads from Como, the Aprica and Tonale Passes through the Val Tellina and the Val di Sole to Bolzano; or the more difficult Umbrail-Stelvio route to the Vintschgau and Merano, from whence the Jaufen Pass leads to Innsbruck. The Reschen-Scheideck (Malser Heide) Pass also connects the upper Vintschgau with the upper Inn Valley, but all western Italy was cut off by the American drive to the Swiss border N. of Como on April 18th. The surrender of the Ligurian army on May 1st virtually completed the campaign, German forces in Italy surrendering on May 2nd, when it became evident that those escaping by the Brenner and its lateral feeders would be trapped by the American Seventh Army forging to the Inn Valley from Garmisch-Partenkirchen and Munich. On May 4th the American Fifth and Seventh Armies joined at Vipiteno (Sterzing) just S. of the Brenner Pass summit, Innsbruck and Salzburg having fallen to the Seventh Army on the preceding day.

J. M. T.

HEADQUARTERS
10TH MOUNTAIN DIVISION
APO 345, U. S. ARMY

25 February 1945

SUBJECT: Commendation for Action Against the Enemy.
To: Officers and Men of the 10th Mountain Division.

In your first assigned mission you had the following difficult tasks:

a. Concentrate in a valley overlooked on three sides by the enemy, over an inadequate road net without being discovered by the enemy.

b. Seize by night assault the precipitous mountain range on your left consisting of mountains Mancello, Serrassiccia, Cappel Busos and Pizzo Campiano.

c. Assault by night the enemy strong defensive line including the successive objectives N.E. of Mt. Gorcelesco to include the final objective—Mt. Tornaccia. A total advance from left to right of some 18,000 meters.

You accomplished all of your assigned missions with magnificent dash and determination. You caught the enemy completely by surprise by your movement at night up precipitous slopes through his heavily mined areas and by your destruction of his dugouts and bunkers. You over-ran and defeated elements of eight different enemy battalions (parts of two divisions, plus two separate battalions), from which you captured approximately 400 prisoners of war. You accomplished these results with remarkably low casualties, in comparison with results achieved.

By your action you have won the confidence and admiration of all troops within the theatre and the highest praise of your Corps, Army, Army Group and Deputy Theatre Commanders.

As your division commander I am very proud of you and salute your courage, determination, fighting spirit, and the professional workmanship you have displayed in all your actions.

GEORGE P. HAYS,
Major General, U. S. Army,
Commanding

Distribution:
All Officers & Troops
10th Mt. Div.

10 March 1945

SUBJECT: Letter of Commendation.
To: Officers and Men of the 10th Mountain Division.

1. The following messages of commendations have been received:

(*a*) *From Field Marshal Alexander, Supreme Allied Commander, Mediterranean Theatre of Operations, to Lieutenant General Truscott:*

8 March 1945

My heartiest congratulations to you personally and your division for a very well planned and well executed operation. Well done. I am delighted at your success.

FIELD MARSHAL ALEXANDER

(*b*) *From Lieutenant General McNarney, Commanding MTOUSA:*

7 March 1945

May I offer my sincere congratulations to the officers and men of the 10th Mountain Division. You have shown by the success of your first battle test offensive capability which will be a constant source of real concern to our enemies. Good luck and good hunting.

MCNARNEY

(*c*) *From Lieut. General Mark W. Clark, Commanding 15th Army Group:*

My congratulations to the officers and men of the 10th Mountain Division on the success of their first major operation, the capture of Mt. Belvedere.

Your Division, in its initial battles, has acquitted itself with the courage and daring of a veteran combat unit. This speaks more eloquently than words of the efficiency of your pre-battle training and the spirit of officers and men.

The 10th Mountain Division has proved itself to have the fighting qualities required for successful infantry combat. I am very happy to have this Division fighting shoulder to shoulder with the other fine troops in the 15th Army Group.

MARK W. CLARK

(*d*) *From Lieut. General L. K. Truscott, Jr., Commanding General 5th Army:*

Upon the conclusion of the first full scale offensive operation against the enemy carried out by the 10th Mountain Division, I desire to extend to every officer and man in the 10th Mountain Division my sincere congratulation of the magnificent manner in which you have accomplished a very difficult assignment. Over difficult terrain against strong opposition, you have seized every objective in record time. You have inflicted severe losses upon at least two German divisions and have compelled the enemy to employ reserve divisions in your area.

I am delighted with the splendid performance of the 10th Mountain Division. Your success clearly indicates careful and meticu-

lous attention to every detail in planning and execution. I especially commend the commanders and staff officers who are responsible.

The 10th Mountain Division in its first operation has been an inspiration to the entire Fifth Army. You have set a high standard and have demonstrated the highest qualifications in leadership and combat. Your outstanding success in your first operation augurs well for a brilliant future. I am proud indeed to have this division fighting shoulder to shoulder with the veteran divisions of the Fifth Army.

L. K. TRUSCOTT, JR.

(*e*) *From Major General Willis D. Crittenberger, Commanding General. IV Corps:*

8 March 1945

In the operation of 3 March to 7 March 1945, inclusive, the 10th Mountain Division has again demonstrated on the battlefield its right to be classified as a splendid combat unit, not only capable of undertaking a sustained advance against a well intrenched and wily enemy deployed on rugged terrain, but eager to do so. The enemy estimate of "Elite Mountain Troops" applied by them to your Division after short and bitter experience, is a deserved compliment.

The spirited attack of your elements, and the smart alert fighting which all ranks displayed were dominant factors in your successful penetration of the enemy's main line of defense. He was overwhelmed by the relentless pressure of your advance. The adroit scheme of the maneuver by your battalions resulted in a large bag of prisoners of war and material that cannot but hasten his final defeat. The fine physical condition of your troops also contributed in large measure to the favorable outcome of the attack.

As your various units now are disposed in firm and confident control of all objectives, it is a great pleasure for me hereby to commend you and your officers and men, not only for a precise and masterly execution of your mission, but as well for the dash and vigor that never for a moment left the issue in doubt.

WILLIS D. CRITTENBERGER

2. As your Division Commander I take pride in publishing to you the official commendations from the Supreme Allied Commander, Mediterranean Theatre of Operations, Commanding General, MTOUSA, the Commander of the Fifteenth Army Group, the Commander of the Fifth Army, and the Commander of the IV Corps. The Generals who commend you are veterans who have personally engaged in some of the heaviest fighting and most difficult operations of this war. The success of our division during our recent operations was dependent upon every officer and man

in the entire division, accomplishing the task assigned him in an efficient and aggressive manner. I hope that each individual in the entire division will feel a personal pride and lasting satisfaction in the recognition thus accorded his part in the accomplishment of a difficult offensive operation. We may all look forward with renewed confidence in our ability to undertake whatever tasks may lie ahead.

GEORGE P. HAYS,
Major General, U. S. Army,
Commanding

NOW IT CAN BE TOLD

During the course of the war many members of the American Alpine Club may have felt grieved that the Club was not taking a greater part in the war effort. If so, they were deceived, for the President, the Council, the Mountain Warfare Committee, and a large number of individual Club Members actually were contributing valuable services in a variety of ways. On many of their activities censorship is now being lifted, and it is hoped that the *Journal* will be able to record in considerable detail the Club's contributions to the 10th Mountain Division as well as to divers military enterprises where civilian mountaineering background was of major importance.

Although detailed discussion of the Club's part in the war effort must be left for the next issue of the *Journal,* it is considered appropriate at this time to indicate at least some of the activities in which members of the American Alpine Club were able to take part because of their background of mountain experience:

Translation of pre-war foreign military documents concerning mountain divisions or mountain warfare.

Assistance in selecting personnel of the 10th Mountain Division in cooperation with the National Ski Patrol.

Active participation in combat with the 10th Mountain Division.

Editing of the American Handbook of Mountaineering and other material for military mountaineering instruction.

Cooperation with the War Department on mountain training policies.

Aid in charting possible routes of attack in Alaska and other mountain areas.

Testing expeditions such as the Wood Yukon Expedition and Mt. McKinley Expedition.

Development of mountain and cold weather equipment which could be made in this country by large scale production methods.

Assistance in developing emergency equipment for the Army Air Forces and special units.

Assistance in setting up search and rescue squadrons and in

training Army Air Forces personnel in survival and rescue techniques.

Assistance in training ground force units in active theaters overseas and in the U. S. with regard to travel and warfare in rough country or mountain areas.

Giving training to troops in active theaters overseas and in continental U. S. and Alaska in fundamentals of cold weather living.

Intelligence work throughout the war concerning foreign mountain troops, including the editing of standard official documents concerning them.

Development of high altitude clothing and equipment for the Air Forces.

Assistance to the Army Air Forces through the Arctic Desert Tropic Information Center and the many arctic enterprises it guided throughout the war.

Assistance in setting up bases in Greenland and northern Canada, and in outfitting forces in these areas.

Research into the physiological effects of high altitude on fliers.

Physiological studies on protection against cold and fatigue.

Assistance on U. S. and Canadian maneuvers of various kinds involving rough country or mountain problems.

Assistance in giving mountain training to Canadian troops.

Participation in setting up mountain training centers both in this country and overseas.

Development of climatic maps for long range military planning.

Assistance in equipping allied mountain troops for special operations.

Liaison with allied armies on problems of mountain warfare.

Active participation in rescue work involving mountaineering techniques.

Assistance in testing the effect of high altitude on the trajectory and performance of Ordnance items.

R. H. B.

American Alpine Journal

With the completion of the 1946 issue, the editorship passes into the competent hands of Robert H. Bates and David Allan Robertson. The growth of the Club and its many activities makes the editorial work a two-man job, and the new régime will secure its future. During a period of thirteen years the retiring editor has had pleasant contacts with many members of the Club, and enjoyed the thrill of reading in manuscript the first news of great expeditions. It is also a matter of pride to have carried on the work during a period of war, when material was difficult to secure and all one could do was to try and keep the *Journal* interesting. Many have assisted in this, and thanks are due them. The new

editors are teachers of English, have a wide expeditionary experience and will ably interpret the efforts of a new generation of climbers in a period which one hopes will be undisturbed by undue displays of atomic energy. J. MONROE THORINGTON

ALASKA

Mt. McKinley Park. Parties travelling from the road near Wander Lake and crossing the McKinley Fork (draining Muldrow Glacier), and then crossing several headwaters of Clearwater Creek, finally turn up Newcomer Creek and cross a ridge at its head by a small pass to reach Muldrow Glacier about 25 miles above its snout. The name of this pass, according to Bradford Washburn who spent most of the winter of 1944-1945 in the McKinley region on work for the Army Air Forces, is commonly misspelled in a number of ways, but seldom spelled as the man for whom it was named spells his own name. Washburn writes: "I met and talked with Charles (Chuck) McGonagall in Fairbanks three weeks ago (end of May, 1945) and he wrote his name for mer (probably the only way I've never seen it spelled). McGonagall is hale and hearty at 75 and is still a close friend of Harry Karstens near whom he lives. He is a carpenter and Karstens is employed at Ladd Field." Karstens made the first complete ascent of Mt. McKinley with Archdeacon Stuck in 1913.

Washburn also writes: "I had a splendid talk with Belmore Browne at Chip Lake on the way south. For a good many years I have not been able to picture clearly just how his party crossed the Alaska Range in the winter of 1912 on their way to McKinley. We took some pictures this spring and were able to identify his still unmapped valley and pass with pinpoint precision, using the pictures in his book. Belmore, of course, has a photographic memory and picked the valley out at once even before we had the book open."

Browne's party first worked out the route from the coast at the head of Cook Inlet by dog-sled in the years before 1912, and in that year crossed the range and found the route to the summit of Mt. McKinley (though failing twice in storm to reach the highest point by a few hundred feet of easy walking). This is the one and only route to the summit used by all parties to climb the mountain viz.: the Stuck-Karstens party in 1913 and the Liek-Lindley party in 1932 (only party to reach both peaks), and the U. S. Army equipment testing expedition in 1942, organized and led on the mountain by members of the American Alpine Club, seven of whom reached the summit. H. S. H., JR.

CASCADE RANGE

Mt. Rainier. The year 1945 marks the seventy-fifth anniversary of the first ascent of Mt. Rainier, which was made on August

17th, 1870, by General Hazard Stevens. General Stevens was the guest of honor of the club and described the ascent at the fourth annual meeting of the Club in Boston, December 28th, 1905. The first ascent of Mt. Rainier by a woman was made in 1890 by Miss Edwina Fay Fuller (Mrs. F. von Briesen), a founding member of the Mazamas (1894) and an original member of the American Alpine Club.

High Peaks in the Antarctic

In a previous note* we questioned the existence of 15,000-ft. peaks in the Antarctic. Perusal of recently issued reports contained in *Proceedings of the American Philosophical Society, Philadelphia,* 1940 (Vol. 82, No. 5) contain the following: On p. 804 under Fig. 2, it states: "Mt. Nansen rises to a height of nearly 15,000 ft. above sea-level." On p. 838 a profile indicates Mt. Fridtjof Nansen as 4010 meters (approximately 13,175 ft.). In another section of the same profile is shown a Mt. Kilpatrick (4450 m.) which is about 14,600 ft.

Again in the *Proceedings* for 1945 (Vol. 89, No. 1) on the "Reports on Scientific Results of the United States Antarctic Service Expedition, 1939-1941" (Admiral Byrd's third Antarctic expedition) one finds the following: On p. 44 is stated: ". . . could be seen a huge mountain near the coast. Later intersections indicated that this mountain, named Mount Ruth Siple, was at least 150 miles away at the time of observation. Its location was determined as in the vicinity of latitude 73° 15′ S., longitude 122° 30′ W., and its elevation was estimated at close to 15,000 ft. In appearance it was very similar to Mount Erebus, being conical in form, but with a rounded dome." On p. 31 there is an air picture from 6000 ft., showing the Barrier in the foreground, and Mt. Siple in the far distance.

Also in the same 1945 report on p. 52 are two photographs which together make a panorama. The central point is a Mt. Bush, perhaps 50 miles from the plane which was flying at 9500 ft. In the text is the statement: "After we crossed the 82nd parallel near longitude 175° W., the lofty peaks of the Austral Cordillera became dimly visible 150 miles to the S. The most outstanding landmark was a huge mountain, due S., which later proved to be Mount Bush. Situated to the N. of most of the range, this gigantic peak apparently rises to an altitude of 15,000 ft., for it was never out of view during the next four hours of flying."

Peaks estimated at over 12,000 ft. were also seen from the air in the southern part of Palmer Peninsula in roughly 65° W. longitude and 73° S. latitude.

Large segments of the Antarctic continent are still entirely unknown.

H. S. H., Jr.

* *A. A. J.*, iv, 146-7.

Rocky Mountains of Canada

Fatal Avalanche at Lake Louise. On March 26th, 1945, about five o'clock in the afternoon, nine skiers from the East, including Hermann Gadner, formerly of Obergürgl, Austria, and more recently ski instructor at St. Jovite, Quebec, were skiing on the N.E. slope of the long S.E. ridge of Mt. Richardson near Lake Louise, when a large avalanche engulfed most of the party and completely buried two. One of these, Mrs. Newman, had fortunately held up a ski pole. A small segment of the pole's basket visible above the snow was discovered in about ten minutes and shortly thereafter we succeeded in uncovering her head. She soon recovered consciousness and was removed from the snow unhurt.

An hour of systematic probing with the longest available poles failed to locate Gadner and it was only after reworking the most likely area with pole plus full arm length, a slow and difficult proceeding, that we finally found him in an almost upright position with head six feet below the surface.

Digging with skis and hands, his head was uncovered within about eighty minutes of burial. He had every appearance of being dead. For over an hour, Royal Little blew air into his lungs, while the rest of us tunneled to reach and release his feet from his skies, which were buried 12 ft. deep. Color was gradually returning, but he did not resume breathing.

Immediately after the accident, Mrs. Cabot skied to Mt. Temple Chalet for help. The first of the rescue party arrived about 7.45, just before Gadner was pulled from the snow. Toboggan and blankets came more than an hour later. In the meantime, Gadner, who was lightly clothed, was wrapped in available clothing and great effort was made to restore him to life; but it was all to no avail.

The slope on which the avalanche occurred was 25 to 30° and 400 to 500 ft. high. The snow on this N.E. exposure was settled powder over unconsolidated granular and averaged about three feet deep. Recognizing the hazard in the wide snow bowl flanking the ridge, the party was descending close to the rocky point at its eastern end and all were within a few yards of the edge of the avalanche, which slid simultaneously throughout a total with of more than half a mile.

Thomas D. Cabot

Foster Peak.. Flight-Lieut. J. S. T. Gibson contributes the following information on this and other climbs of 1942 (see *A.J. 54,* 399; where "Easter Pk." should be Foster Pk.). From Floe Lake crossed meadows and moraines, then the lower part of a small glacier followed by more screes, in an ascending traverse to a col at the N. side of the mountain (extreme right as seen from Floe Lake.) At col turn left and climb rocks: interesting and

intricate route without great difficulty, 800′ to broken ground between lower and upper cliffs. Then up smooth slabs at easy angle, steepening as they approach upper cliff. The last bit before the upper cliff is a steep slab, climbed by a crack running up its face, to a knife-edge arête separated from the main face by a gulley 20′ wide and 1000′ deep. The arête connects with the main face, and another 800′ of moderately difficult climbing leads to the ridge about 100′ below the summit. Ascent from Floe Lake, 4 h.; descent by same route.

Mt. Blakiston. A cairn was found on the summit; no details of first ascent. From camp beside Blakiston Brook (6.30 A.M.) through trees by river cross and ascend side valley past a waterfall into a high corrie. Turn right above waterfall and proceed up grassy shoulder (until 9.20 A.M.) to point where grass gives way to rock. This is the ridge which is at the right-hand end of the mountain as seen from the Waterton Park road at the bottom of the valley. About 1000′ of rock and scree now separates one from the summit ridge, which is reached without difficulty. A direct traverse along the summit ridge is prevented by a vertical step of about 200′ On left (S.) side, the face is vertical but on the right it slopes down at a fairly easy angle, and it is possible to descend and traverse around the vertical rocks. Thence up rocks and snow couloirs to the ridge about 300′ below the summit, and from there zigzagging ledges and more snow couloirs to the summit, which is a narrow ridge with cornice on S. (June 8th).

In the neighborhood of Mt. Blakiston there are few other Canadian peaks worth climbing, many being rounded domes with pony trails to their summits.

Climber's Guide to the Rocky Mountains of Canada. Mr. M. P. Bridgland, formerly of the Dominion Land Survey of Canada and a member of our Club since 1903, has sent the editor a complete list of his many ascents, indicating changes in the guidebook (corrected edition, 1943), as follows: The Topographical Survey made first ascents of the following: Bonnet Mtn. (p. 50) in 1914; Wapiti Mtn. (p. 58) in 1918; Sheol (p. 81) in 1903; Wampum Pk. (p. 123) in 1919. Unnamed 10,174′ (p. 131) is now Smoky Mtn. and was ascended in 1919. Conical Pk. (p. 164) and an unnamed peak 1.5 mi. S.E. of the latter were first ascended by the Topographical Survey in 1924; also Mt. Siffleur (p. 166). The Topographical Survey also made the following first ascents: unlisted Unnamed 10,054′ (p. 167; 5 mi. S.E. of Mt. Coleman and on opposite side of Sunset Pass) in 1927; Unnamed 10,054′ (p. 167; N.E. of Wildfowl Lakes) in 1927; Unnamed 10,264′ (p. 216; E. of Job Pass) in 1928; Unnamed 9717′ (p. 217; between forks of Brazeau River) in 1928. Unnamed 9500′ (p. 217; ascended in

1892 by Coleman and Stewart) is on the northerly ridge of the latter peak.

Centenary of Professor Fay. March 10th, 1946, marks the centenary of the birth of Charles E. Fay, first president of the American Alpine Club, whose biographical sketch will be found in this issue. It would be most appropriate if some of our members visiting Canada in the coming summer, would spend a night at the Fay Hut and climb Mt. Fay.

Selkirk Range of British Columbia

Guidebook to the Interior Ranges. Professor F. K. Butters has kindly contributed the following notes:

1. So far as I am aware the first traverse of Uto from S. to N. was made in 1911 by H. Palmer, T. G. Longstaff and myself. It was made on the same day as the trip made by Miss Cummins, Miss Finlayson and the guides Feuz, noted in brackets at the bottom of p. 14. We were all together in the Uto-Sir Donald col. Then the other party descended the E, slope below the col, and we went directly up the Uto arête, descending by Route 1. This was only a few weeks after Merle-Smith's ascent by Route 2.

2. A fifth route up Mt. Bonney is from the valley of Smart Creek. Palmer and I, with Ern. Feuz, did it in 1915 the day after we climbed Mt. Smart. It is probably the easiest route to the summit since the scree slopes toward the head of Smart Creek valley lead directly up to the snowfield on the W. side of Mt. Bonney, and that is very easy going.

3. Route 4 (p. 28) up Häsler Peak seems to be merely a restatement of Route 1, and likewise (p. 29) Route 1 and 2 on Mt. Selwyn are identical. The early accounts put too much emphasis on the head-wall of the Dawson-Fox amphitheatre. I suppose it can be nasty under some conditions, but it wasn't bad when I was there. On the other hand, the snowfield between the top of this wall and the top of the ridge that runs out toward Mt. Fox contains the largest hidden crevasses that I have ever seen, and also about the most thoroughly hidden. If it ever becomes a popular route there will sooner or later be a bad spill there.

4. Route 2 under Mt. Sugarloaf is quite impossible. The "W. end of the Bishops Range" is at least 10 miles from Sugarloaf with two or three high mountains (Wheeler, Grand, etc.) in between. From the *east* end of the Bishops Range it is of course possible to cross the Deville névé, and descend the northern Grand Glacier, and so arrive at the same place at the foot of the Grand Glaciers that one starts from in Route 1. This in itself is an all day trip (I did it once in the opposite direction) and is not at all a route on Mt. Sugarloaf, but rather a quite sporty and difficult method of reaching that rather remote mountain.

Mr. M. P. Bridgland states that Ursus Minor Mtn. (p. 47) was first ascended by the Topographical Survey in 1902, and Mt. Copeland (Monashee Range; p. 138) in 1910.

Alps

Two paintings by Gabriel Loppé. In the pages of the 'Alpine Journal' there is probably no biographical sketch more sympathetic than that of the artist, Gabriel Loppé (1825-1913), by D. W. Freshfield (*A.J. 37,* 334).

Two of his paintings, held by the Philadelphia Art Museum since 1893 and recently sold at auction, were secured by the editor because of their historical associations. They are large canvases (4 × 6 ft.), undated, but executed about 1870. The titles are: "Glacier of the Gorner and the Matterhorn at Sunset," and "The Black Vein on the Mer de Glace at Chamounix." The latter is a fine study of crevassed ice with the Aig. de Géant and the Grands Charmoz as a background. In this scene a lady in red hoopskirt, and her male companion, are being escorted by a guide down a slender crest of sérac. Alpenstocks are being used and the party is unroped.

Loppé was born in Montpellier, the son of a captain of engineers, and studied for a short time in the studio of Diday, at Geneva, but was largely self-taught. A crossing of the Strahlegg Pass in 1846 opened his eyes to the Alpine world. In 1851 he married and settled at Annecy, moving to Geneva in 1862.

He visited Chamonix as early as 1849, and in 1861 ascended Mont Blanc three times to make studies for his "Sunrise," now in the Alpine Club rooms. He was elected an honorary member of that organization in 1864, proposed by Alfred Wills and seconded by Leslie Stephen, the second edition of whose *Playground of Europe* is dedicated to Loppé.

The artist painted on the summit of Mont Blanc on eleven occasions, being there with Stephen in 1873 and witnessing the sunset which gave rise to the latter's noted essay in Cornhill Magazine. Loppé's mission was to depict the glacier, to be the painter of snow mountains, and many members of the American Alpine Club will recall the permanent exhibition of his works at Chamonix.

Early American Travellers in the Alps. The paintings of "The Hudson River School," exhibited in 1945 under the auspices of the Art Institute of Chicago and the Whitney Museum of American Art, New York City, include many mountain landscapes in the early American tradition. It has been interesting to select from the catalogue those artists whose biographical sketches indicate that they had travelled in the Alps, thus adding to the list contained in *Early American Ascents* (1943).

Washington Allston (1779-1843; Harvard, 1800), during the winter 1804-05 crossed the St. Gotthard Pass to Lake Maggiore on his way to Rome. As he was the most important figure in American landscape painting at the beginning of the nineteenth century, it is of interest that he remarked on the "poetic truth" of Turner's Swiss scenery.

Allston was the teacher of Samuel F. B. Morse (1791-1872; Yale, 1810), who returned across the Alps from Rome in 1831 and painted the view of the Wetterhorn and the Falls of the Reichenbach, now in the Newark Museum.

John Vanderlyn (1776-1852) went to Paris with Allston in 1803, and two years later journeyed through Switzerland to Italy. Alvin Fisher (1792-1863) made the Grand Tour in 1825. Thomas Cole (1801-48), on the advice of Washington Allston, visited Switzerland during his second trip abroad, 1841, while a visit to Sicily gave rise to four paintings of Mt. Etna. Jasper F. Cropsey (1823-1900) was in Switzerland in 1847.

Asher B. Durand (1796-1886) crossed Switzerland from the Rhine to the Italian Lakes in 1840, and was ecstatic over the scenery. During his return he painted icebergs from the steamer, a subject that excited other contemporary artists such as F. E. Church.

John F. Kensett (1818-72), who had accompanied Durand to Europe in 1840, remained there for seven years, during which time he also visited Switzerland.

Worthington Whittredge (1818-72) went to Düsseldorf in 1849, where he had the curious experience of serving as the model for the General in Emanuel Leutze's painting of Washington Crossing the Delaware. He afterward travelled in Switzerland and remained in Europe for ten years. In 1865 he painted in Colorado and New Mexico, while accompanying General Pope on an inspection tour through the Rockies.

Frederick Edwin Church (1826-1900), inspired by Humboldt, painted Chimborazo and Cotopaxi during his journeys to South America in 1853 and 1857, and in 1859 went to Labrador as the first artist to do so for the sole purpose of painting. In 1868 he visited the Bavarian Alps, painting at Salzburg and Berchtesgaden, his work marking the culmination of romantic landscape art in America up to that time.

J. M. T.

Corrigenda

Mr. N. E. Odell informs us that Mrs. Chisholm of Glen Brittle, Skye (*A.A.J.* v, p. 372), is still living and that he talked with her by phone in December. We regret our incorrect report and also the error (p. 445) through which the name of Professor Salisbury was spelled phonetically.

CORRESPONDENCE

At the moment of going to press we have received from the Alpine Club of Canada a copy of the letter of protest sent by them in connection with the altering of the name Castle Mtn. to "Mt. Eisenhower." The American Alpine Club is in entire agreement.

January 10, 1946.

Sir:

The renaming of Mount Castle to 'Eisenhower' has just been announced by the Press. The Alpine Club of Canada greatly regrets that such action was taken, and is concerned lest other great peaks of our Canadian mountains should suffer a similar fate.

While we recognize the kind thought that prompted such action, as honoring our very distinguished visitor, surely there is some better way of doing honour to him than by renaming a landmark which is so fittingly named and has been so affectionately regarded as 'Castle' both by thousands of Canadian citizens and countless of our American friends. We earnestly hope that other great peaks which have become so well known and beloved will remain inviolate in this regard. To rename such a sublime peak as Mount Temple, for example, 'Alexander' or 'Montgomery' would truly be an act of sacrilege in the eyes of most Canadians. We sincerely trust that you can assure us that such shall not not take place.

We would take this opportunity of suggesting that the Alpine Club of Canada be granted representation on the Geographic Board, or at least be consulted when any change in nomenclature of Canada's topographical features is contemplated. We feel that as we are the premier exploratory and mountaineering organization in Canada, and as such reflect the wishes and desires of all those who work towards the preservation of Canada's natural beauties, and in the education of Canadians to an appreciation of their mountain heritage, that such representation is not only desirable but in the best interests of Canada.

We urge that you will give this matter your careful consideration, and hasten to assure you that what is herein contained is submitted in a spirit of helpfulness and co-operation. We are fully appreciative of your great services to the people of Canada, and know that you have always had

their best interests at heart. It is for this reason that we bring this matter to your attention.

We have the honor to be, Sir,

Yours faithfully,

ERIC BROOKS,
President, Alpine Club of Canada.

The Right Honorable Mackenzie King,
Laurier House,
Ottawa, Canada.

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All communications should be addressed to the Club Rooms. Back Numbers of the American Alpine Journal may be had on application. Price of current issue $1.00 per copy.

Material for publication should reach the Editor not later than October 1.

FORM OF BEQUEST

I do hereby give and bequeath to the American Alpine Club, 140 East 46th Street, New York City.....